

### EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Review Article
ISSN 2394-3211
EJPMR

## ANTIHEAMORRHOIDAL DRUGS USED IN AYURVEDA: A LITERARY REVIEW

### Patel Akanksha<sup>1</sup>, Daharia Madhuri<sup>1</sup>, Gupta Rakshapal<sup>2</sup> and Rout Om Prakash\*<sup>3</sup>

<sup>1</sup>M.D. Scholar, Post Graduate Department of Dravyaguna, Govt. Ayurved College, Raipur, Chhattisgarh. <sup>2</sup>Professor & HOD, Post Graduate Department of Dravyaguna, Govt. Ayurved College, Raipur, Chhattisgarh. <sup>3</sup>Lecturer, Post Graduate Department of Dravyaguna, Govt. Ayurved College, Raipur, Chhattisgarh.

\*Corresponding Author: Dr. Rout Om Prakash

Lecturer, Post Graduate Department of Dravyaguna, Govt. Ayurved College, Raipur, Chhattisgarh.

Article Received on 27/08/2017

Article Revised on 17/09/2017

Article Accepted on 07/10/2017

#### ABSTRACT

In Ayurvrdic Grantha, Veda, Samhita and Lexicons there are many treatment modalities have been explained for various diseases. In A.P.I. there is collection of these drugs. Under the Drugs & Cosmetics Act, the Ayurvedic Pharmacopoeia of India (A.P.I.) is the book of standards for single drugs included therein and the standards prescribed in the Ayurvedic Pharmacopoeia of India is official. Ayurveda plays vital role in curing Arsha (Haemorrhoids) without surgical intervention there are so many herbal drug having Arshoghna property. In Arshas management the systemic medicines act by improving appetite, regularize bowel habits, astringent action on blood vessels and maintaining Agni and Srotas in equilibrium. Total number of arshoghna single drugs mentioned in A.P.I. part I is 97 and total number of formulations having arshoghna property in A.P.I. part II is 32. The present study is designed to screen all drugs mentioned in Ayurvedic Pharmacopoeia of India (A.P.I.) used for treatment of Arsha.

**KEYWORDS:** Arsha, A.P.I., Antiheamoprrhoids, Ayurveda.

### INTRODUCTION

India, due to its unique variety of geographical and climatic factors, had a rich and varied flora of medicinal plants since the Vedic period. No wonder that of a total number of over 15,000 plant species in India about 2000 are known to have medicinal properties and some of them are used even as home-remedies in the rural and remotest parts of the country. The Ayurvedic system of medicine has been prevalent in India since the Vedic period, and still remains the mainstay of medical relief to over 60 per cent of the population of the nation. In earlier times the practitioners of Ayurveda (Vaidya) were themselves collecting herbs and other ingredients and preparing medicines. For the purpose of acquiring raw materials Vaidyas now depend on commercial organizations trading in crude herbal drugs. Likewise, with passage of time a number of Ayurvedic Pharmaceutical units have come up for the manufacture of Ayurvedic drugs and formulations on commercial scale.[1]

To ensure control over the production and sale of medicines the Drug and Cosmetic Act 1940 was accordingly amended in 1964. According to this act the manufacture should be carried under prescribed hygienic conditions, under the supervision of a person having a prescribed qualification, the raw material used in the preparation of drugs should be genuine and properly identified and the formula or the true list of all the

ingredients contained in the drugs, should be displayed on the label of every container. Under the Drugs & Cosmetics Act, the Ayurvedic Pharmacopoeia of India (A.P.I.) is the book of standards for single and is official. If considered necessary these standards can be amended and the Chairman of the Ayurvedic Pharmacopoeia Committee authorised to issue such amendments. In A.P.I. there are monographs mentioned for each drug. In monographs of A.P.I. Title, Names of the drugs, Introductory paragraph, Synonyms, Italics, Odour & taste, Mesh number, Weights & measures, Identity, purity & strength, Quantities to be weighed for assays & tests, Constant weight, Constituents, Percentage of solutions, Temperature, Solutions, Reagents & solutions, Solubility, Therapeutic uses & important formulations and Doses. [1]

Haemorrhoids are swollen blood vessels around the anus. Haemorrhoids may protrude externally or be internal to the body. Although haemorrhoids are definitely irritating and sometimes debilitating, they are almost never life threatening or a symptom of something worse. [2]

For haemorrhoids many drugs have been mentioned in Ayurveda classics. A disease which tortures patient's vital force (Prana) as enemy is called as Arsha according to Ayurveda. [3] In modern day to day life of urgency and emergency patients neglects proper diet and lifestyle habits. It ends in reducing digestive fire (Agni) or

making it abnormal (Mandagni). Mandagni means patient is not able to digest food material at proper speed and time. It results in accumulation or stagnation of half digested food material (Aam) in the form of stool inside or throwing it before time in watery or semisolid form

which disturbs doshas at ano-rectal region. To treat these diseases completely one need to know the root cause and try to eradicate it. Ayurveda correctly explains the physiology, pathology and treatment of these diseases.

Table 1: API PART I VOLUME  $I^{[1]}$ 

S. No.	Name	Botanical Name	Family	Useful Part	Dose & Forms
1.	Arka	Calotropis procera	Asclepiadaceae	Leaf	250-750 of the drug in powder form
2.	Citraka	Plumbago zeylanica	Plumbaginaceae	Root	1-2 g of the drug in powder form
3.	Goksura	Tribulus terrestris	Zygopyllaceae	Fruit	3-6 g of the in powder form
4.	Haritaki	Terminalia Chebula	Combretaceae	Fruit	3-6 g of the drug in powder form
5.	Lavanga	Syzygium aromaticum	Myrtaceae	Flower	0.5-2.0 g of the drug in powder form
6.	Nyagrodha	Ficus bengalensis	Moraceae	Stem bark	3-6 g of the drug in powder form
7.	Tvak	Cinnamomum zeylanica	Lauraceae	Bark	1-3 g of the drug in powder form
8.	Tvakpatra	Cinnamomum Tamala	Lauraceae	Leaves	1-3 g of the drug in powder form

## Table 2: API PART I VOLUME II<sup>[4]</sup>

S. No.	Name	Botanical Name	Family	Useful Part	Dose & Forms
1.	Apamarga	Achyranthes aspera	Amaranthaceae	Whole plant	20-50 of the drug for decoction
2.	Bhallataka	Semecarpus anacardium	Anacardiaceae	Fruit	1.2 g of the drug in Ksirapaka
3.	Cavya	Piper retrofractum	Piperaceae	Stem	1-2 g of the drug in powder form
4.	Kakamaci	Solanum nigrum	Solanaceae	Whole plant	5-10l of the drug in juice form
5.	Kozuppa	Portulaca oleracea	Portulacaceae	Whole plant	3-6 g of the drug in powder form
6.	Mulaka	Raphanus sativus	Brassicaceae	Whole plant	20-401. of the drug in juice form
7.	Mulaka	Raphanus sativus	Brassicaceae	Root	15-301. of the drug in the juice form
8.	Murva	Marsdenia tenacissma	Asclepiadaceae	Root	2-6 g. of the drug in powder form 10-20. of the drug for decoction
9.	Palash	Butea monosperma	Fabaceae	Stem bark	5-10 g. of the drug in powder form

### Table 3: API PART I VOL III<sup>[5]</sup>

S. No.	Name	Botanical Name	Family	Useful Part	Dose & Forms
1.	Agnimantha	Clerodendrum phlomidis	Verbenaceae	Root	12-24 g. of the drug in powder form for decoction
2.	Aralu	Ailanthus excelsa	Simarubaceae	Stem bark	1-3 g
3.	Arka	Calotropis procera	Asclepiadaceae	Stem bark	0.5-1 g. in powder form
4.	Asthisamhrta	Cissus quadrangularis	Vitaceae	Stem	10-20 l. (Svarasa) 3-6 g. (Powder)
5.	Cangeri	Oxalis corniculata	Oxalidaceae	Whole plant	5-10 ml. (Svarasa). It is also used externally
6.	Cirabilva	Holoptelea integrifolia	Ulmaceae	Fruit	1-4 g
7.	Danti	Baliospermum montanum	Euphorbiaceae	Root	1-4 g. of the drug in powder for
8.	Draksa	Vitis vinifera	Vitaceae	Fruit	5-10 . of the drug
9.	Eranda	Ricinus communis	Euphorbiaceae	Seed	1/2 - 3 g. (Powder)
10.	Gambhari	Gmelina arborea	Verbenaceae	Stem	5-10 g. of the drug for decoction
11.	Hapusa	Juniperus communis	Cupressaceae	Fruit	2-6 g. in powder form
12.	Jati	Jasminum officinale	Oleaceae	Leaf	10-20 . of powder for decoction
13.	Kataphala	Myrica esculenta	Myricaceae	Fruit	3-5 g
14.	Kataphala	Myrica esculenta	Myricaceae	Stem bark	3-5 g
15.	Kosataki	Luffa acutangula	Cucurbitaceae	Whole plant	5-10
16.	Langali	Gloriosa superba	Liliaceae	Tuberous root	125-250 . of purified drug
17.	Lasuna	Allium sativum	Liliaceae	Bulb	3 - g. of the drug
18.	Manjistha	Rubia cordifolia	Rubiaceae	Stem	2-4 g. of the drug
19.	Patala	Stereospermum sauveolens	Bignoniaceae	Root	5-10 g. (Powder) 25-50 ml. (Decoction)
20.	Falgu	Ficus hispida	Moraceae	Fruit	10-20
21.	Falgu	Ficus hispida	Moraceae	Root	1-3 g. of the drug in powder form
22.	Raktapunarnava	Boerhavia diffusa	Nyctaginaceae	Root	1-3 g. of powder. 10-20 ml. (Fresh Juice)
23.	Sakhotaka	Streblus asper	Moraceae	Stem bark	1-3 g. (Powder). 10-20 g. (for decoction)
24.	Salaparni	Desmodium gangeticum	Fabaceae	Root	5 -10g. of the drug in powder form. 10-20 g. for decoction
25.	Simpasa	Dalbergia sisso	Fabaceae	Heartwood	5 -10 g. of the drug in powder form. 10 -20 g. for decoction
26.	Surana	Amorphophallus campanulatus	Araceae	Corm	2-10 g. of the drug in powder form

# Table 4: API PART I VOLUME IV<sup>[6]</sup>

S. No.	Name	Botanical Name	Family	Useful Part	Dose & Forms
1.	Adhaki	Cajanus cajan	Fabaceae	Seed	-
2.	Aklari	Lodoicea maldivica	Arecaceae	Endosperm	5-10 of the drug in powder form
3.	Bilva	Aegle marmelos	Rutaceae	Stem bark	15-301
4.	Gambhari	Gmelina arborea	Verbenaceae	Stem bark	3-5 gm
5.	Karcura	Curcuma zedoaria	Zinziberaceae	Rhizome	1-3 g of the drug in powder form
6.	Mahanimba	Melia azadarach	Meliaceae	Stem bark	5-10gm
7.	Mayakku	Quercus infectoria	Fagaceae	Galls	1-3 g of the drug in powder form
8.	Palash	Butea monosperma	Fabaceae	Flower	3-6 g of the drug in powder form
9.	Palash	Butea monosperma	Fabaceae	Gum	0.5 to 1.5 gm
10.	Palash	Butea monosperma	Fabaceae	Seed	2 g of the drug in powder form
11.	Pippali	Piper longum	Piperaceae	Fruit	1-3gm
12.	Shigru	Moringa oleifera	Moringaceae	Stem bark	Stem bark juice 10-20ml, stem bark powder 2-5gm
13.	Talamuli	Curculigo archoides	Amaryllidaceae	Rhizome	3-7 g of the drug in powder form
14.	Tumburu	Zanthoxylum armatum	Rutaceae	Fruit	2-4gm
15.	VArshabhu	Trianthema portulacastrum	Aizoaceae	Root	2-5 g of the drug in powder form
16.	Vishamushti	Strychnosnux-vomica	Fabaceae	Seed	60-125 mg powder of the sodhita drug

### Table 5: API PART I VOLUME V<sup>[7]</sup>

	API PARTI VO		T		
S. No.	Name	Botanical Name	Family	Useful Part	Dose & Forms
1.	Asphota	Vallaris Solanacea	Apocynaceae	Root	3-6gm
2.	Bastantri	Argyreia nervosa	Convolvulaceae	Root	3-5gm
3.	Canda	Angelica archangelica	Apiaceae	Root	1-3gm
4.	Gandira	Coleus forskohlii	Lamiaceae	Root	3-5gm
5.	Himsra	Capparis spinosa	Capparidaceae	Root	1-3gm
6.	Karkasa	Momordica dioica	Cucurbitaceae	Root	3-6gm
7.	Kebuka	Costus speciosus	Zingiberaceae	Rhizome	3-6g
8.	Latakaranja	Caesalpinia bonduc	Caesalpiniaceae	Seed	1-3g
9.	Lavaliphala	Phyllanthus acidus	Euphorbiaceae	Fruit	10-20gm
10.	Meshashringi	Gymnema sylvestre	Asclepiadaceae	Leaf	3-6gm
11.	Nimba	Melia azadirachta	Maliaceae	fruit	1-2 g powder 5-10 drops of oil
12.	Palash	Butea monosperma	Fabaceae	Seed	0.5 to 1gm
13.	Palash	Butea monosperma	Fabaceae	Flower	3-6 g
14.	Piluh	Salvadora persica	Salvadoraceae	Fruit	3-6 g
15.	Piluh	Salvadora persica	Salvadoraceae	Leaf	3-6 g
16.	Piluh	Salvadora persica	Salvadoraceae	Root bark	10-20 g for decoction
17.	Putikaranja	Caesalpinia crista	Caesalpiniaceae	Stem bark	50- 100 ml in the form of decoction.
18.	Vanda	Dendrophthoe falcata	Loranthaceae	Fruit	10-20 ml

# Table 6: API PART I VOLUME VI<sup>[8]</sup>

S. No.	Name	Botanical Name	Family	Useful Part	Dose & Forms
1.	Aranyasurana	Synantheria sylvatica	Araceae	Tuber	5 to 10 g after Shodhan in
	Thany as ar and	Syntantine ta syrvanica	Thuccuc	ruser	powder form
2.	Asthishrinkhala	Cissus quadrangularis	Vitaceae	Aerial part	Swarasa: 10 to 20 ml
2.	Astinsiii iiikilala	Cissus quadranguaris	Vitaccac	Acriai part	Adrakalka: 10 to 20 g
3.	Dhava	Anogeissus latifolia	Combretaceae	Fruit	Powder: 5 to 10 g
4.	Dhava	Anogeissus latifolia	Combretaceae	Stem bark	Kvatha: 30 to 50 ml
5.	Elavalukam	Prunus avium	Rosaceae	Root	Powder :1-3gm
6.	Erandakarkati	Carica papaya	Caricaceae	Root	Powder :2-6 gm
7.	Goksura	Tribulus terrestris	Zygophyllaceae	Whole plant	Powder: 3-6 g
7.	Goksura	Tribuius ierresiris	Zygopnynaceae	whole plant	Decoction: 50-100 ml
8.	Jalakumbhi	Pistia stratiotes	A#00000	Whole plent	Powder:3-5 g
٥.	JaiakuiiiDIII	Fisha stranoles	Araceae	Whole plant	Juice :10-20n ml
9.	Kesaraja	Wedelia chinensis	Asteraceae	Whole plant	Powder: 3-6 g
10.	Matsyapatrika	Merremia tridentata	Convolvulaceae	Whole plant	Powder: 3-6 g

					Juice: 5-10 ml
11.	Patrasnuhi	Euphorbia nivulia	Euphorbiaceae	Latex	Latex: 125-250 mg
12.	RaktaCitraka	Plumbago indica	Plumbaginaceae	Root	Powder : 0.5- 2 g
13.	Salaparni	Desmodium gangeticum	Fabaceae	Whole plant	Powder :6-12g Juice :50- 100 ml
14.	Saurabhanimba	Murrayakoenigii	Rutaceae	Leaf	Powder: 3-6 g Juice: 10-20 ml
15.	Sitivaraka	Celosia argentea	Amaranthaceae	Seed	Powder: 3-6 g
16.	Slipadarikanda	Typhonium trilobatum	Araceae	Tuber	Powder :5-10 g daily dose after Sodhan
17.	Tuvaraka	Hydnocarpus pentandra	Flacouritiaceae	Seed	Powder: 1-3 g
18.	Vanya- Asvagola	Plantago lanceolata	Plantaginaceae	Fresh Leaf	Leaf juice : 5-10ml
19.	Vetra	Calamus rotang	Arecaceae	Rhizome	Decoction: 50-100 ml Powder: 5-10 g
20.	Vrntamlaphala	Garcinia pedunculata	Guttiferae	Fruit rind	Juice: 5-10 ml
21.	DarusitaTaila	Cinnamomum zeylanicum	Lauraceae	Oil	1-3 drops
22.	Madhu	A. Indica	Apidae	Honey	1- 10 ml
23.	Sarkara	-	-	Sugar	5-30 g
24.	Sarsapa Tail	Brassica campestris	Brassicaceae	Oil	5-10 ml

# Table 7: API PART IVOLUME VII<sup>[9]</sup>

S. No.	Name	<b>Botanical Name</b>	Family	Useful Part	Dose & Forms
1.	Tuttha	-	-	-	15-30 mg

# Table 8: API PART I VOLUME VIII<sup>[10]</sup>

S. No.	Name	Botanical Name	Family	Useful Part	Dose & Forms
1.	Haritaki	Terminalia chebula	Combretaceae	Fruit	3-6 g drug in powder form
2.	Kalamegha	Andrographis paniculata	Acanthaceae	Aerial	1-3 g of the drug in powder form
3.	Satavari	Asparagus recemosus	Liliaceae	root	3-6 g of the drug

# Table 9: API PART II VOLUME I<sup>[11]</sup>

S. No.	Name	Dose & Forms	Ref.
1.	Bhallatakadi modaka	2 -5 g daily in divided doses	AFI, Part- I, 3:21
2.	Citraka haritaki	6-12 g daily in divided dose	AFI, Part- I, 3:10
3.	Pugakhanda	12 g daily in divided doses	AFI, Part- I, 3:17
4.	Avipattikara curna	10 g daily in divided doses	AFI, Part-I, 7:2
5.	Pusyanug curna	6 g daily in divided dose	AFI, Part-I,7:23
6.	Panchtikta ghrita	12 g daily in divided dose	AFI, Part-I,6:26
7.	Apamarga ksara	125-500 mg daily in divided dose	AFI, Part-I,10:2
8.	Kalyanaka ksara	1 g daily in divided dose	AFI, Part-I,10:10

## Table 10: API PART II VOLUME $II^{[12]}$

S. No.	Name	Dose & Forms	Ref.
1.	Abhayarista	15-30 ml orally with equal amount of water after meals twice a day	AFI, Part- I, 1:1
2.	Asokarista	15-30 ml orally with equal amount of water after meals twice a day	AFI, Part- I, 1:5
3.	Asvagandhadyarista	15-30 ml orally with equal amount of water after meals twice a day	AFI, Part- I, 1:6
4.	Dasamularista	15-30 ml orally with equal amount of water after meals twice a day	AFI, Part-I, 1:18
5.	Draksasava	15-30 ml orally with equal amount of water after meals twice a day	AFI, Part- II,1:1
6.	Kumaryasava(B)	15-30 ml orally with equal amount of water after meals twice a day	AFI, Part-I,1:13
7.	Lohasava	15-30 ml orally with equal amount of water after meals twice a day	AFI, Part-I,1:32
8.	Pippalyadyasava	15-30 ml orally with equal amount of	AFI, Part-I,1:22

		water after meals twice a day	
9.	Rohitakarista	15-30 ml orally with equal amount of water after meals twice a day	AFI, Part-I,1:31
10.	Usirasava	15-30 ml orally with equal amount of water after meals twice a day	AFI, Part-I,1:8
11.	Madhusnuhi rasayana	6-12 g twice a day	AFI, Part-I,3:19
12.	Bhaskaralavana curna	2-5 g in divided doses	AFI, Part-I,7:27
13.	Narasimha curna	2-5 g in divided doses	AFI, Part-I,7:18
14.	Dadimadi ghrta-A	6-12 g Twice a day	AFI, Part-I,6:19
15.	Dadimadi ghrta-B	6-12g Twice a day	AFI, Part-I,6:19
16.	Tiktaka ghrta-A	6-12 g Twice a day	AFI, Part-I,6:13
17.	Tiktaka ghrta-B	6-12 g Twice a day	AFI, Part-I,6:13
18.	Saptavimsatika	2-3 g daily in divided doses	AFI, Part-I,5:11
19.	Triphala guggulu	2-3 g daily in divided doses	AFI, Part-I,5:5
20.	Yogaraja guggulu	2-3 g daily in divided doses	AFI, Part-I, 5:7
21.	Ksara sutra	-	SusrutaSamhita Cikitsa-Sthana-17/26-30 CakradattaArsa Cikitsa-148

Table 11: API PART II VOLUME III<sup>[13]</sup>

S. No.	Name	Dose & Forms	Ref.
1.	Asvagandhadi lehya	6-12 g with milk	AFI, Part-I, 3:2
2.	Sukumar ghrta	6-12 g per day in divided doses with warm water/milk	AFI, Part-I, 6:44
3.	Punarnavadi mandura	1-2 g per day in divided doses	AFI, Part-I, 19:1

### DISCUSSION

Drugs from whole A.P.I. were screened for the antipyretic action. In A.P.I. part I there are total 600 monoghraphs out of which arshoghna property is present in 104 monographs. In A.P.I. part I volume I there are 80 monographs out of which 8 monographs are having arshoghna property, in A.P.I. part I volume II there are 78 monographs out of which 9 monographs are having arshoghna property, in A.P.I. part I volume III there are 100 monographs out of which 26 monographs are having arshoghna property, in A.P.I. part I volume IV there are 68 monographs out of which 16 monographs are having arshoghna property, in A.P.I. part I volume V there are 92 monographs out of which 18 monographs are having arshoghna property, in A.P.I. part I volume VI there are 101 monographs out of which 24 monographs are having arshoghna property, in A.P.I. part I volume VII there are 21 monographs out of which 1 monographs are having arshoghna property, in A.P.I. part I volume VIII there are 60 monographs out of which 3 monographs are having arshoghna property. In A.P.I. part II there are total 152 monoghraphs out of which arshoghna property is present in 32 monographs. In A.P.I. part II volume I there are 50 monographs out of which 8 monographs are having arshoghna property, in A.P.I. part II volume II there are 51 monographs out of which 21 monographs are having arshoghna property, in A.P.I. part II volume III there are 51 monographs out of which 3 monographs are having arshoghna property.

#### **CONCLUSION**

In the present study we studied all drugs mentioned in Ayurvedic Pharmacopoeia of India (A.P.I.) to find out drugs having Arshaoghna property. Total number of arshoghna single drugs mentioned in A.P.I. part I is 97 and total number of formulations having arshoghna property in A.P.I. part II is 32.

### REFERENCE

- 1. Anonymous, The Ayurvedic Pharmacopoeia of India, Part-I, Volume-I, First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2001.
- http://www.slideshare.net/drbrajeev/life-stylediseases-15857440.
- 3. Kushwaha Harisha Chandra Singh, Caraka Samhita, Chaukhambha Orientalia Varanasi, Part I, Eedition reprint: 2011, Shadvirechanshatasritiyaadhyaya 4, shloka no. 11, p 64.
- Anonymous, The Ayurvedic Pharmacopoeia of India, Part-I, Volume-II, First edition First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 1999.
- Anonymous, The Ayurvedic Pharmacopoeia of India, Part-I, Volume-III, First edition, First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2001.
- 6. Anonymous, The Ayurvedic Pharmacopoeia of India, Part-I, Volume-IV, First edition, First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2004.
- Anonymous, The Ayurvedic Pharmacopoeia of India, Part-I, Volume-V, First edition, First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2006.
- 8. Anonymous, The Ayurvedic Pharmacopoeia of India, Part-I, Volume-VI, First edition, First edition,

- New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2009.
- Anonymous, The Ayurvedic Pharmacopoeia of India, Part-I, Volume-VII, First edition, First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2009.
- Anonymous, The Ayurvedic Pharmacopoeia of India, Part-I, Volume-VIII, First edition, First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2011.
- 11. Anonymous, The Ayurvedic Pharmacopoeia of India, Part-II, Volume-I, First edition, First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2008.
- Anonymous, The Ayurvedic Pharmacopoeia of India, Part-II, Volume-II, First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2009.
- 13. Anonymous, The Ayurvedic Pharmacopoeia of India, Part-II, Volume-III, First edition, New Delhi: Govt. of India, Ministry of Health of Family Welfare, 2011.