

Physico-Chemical Study on Alambushadi Churna Tablet

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Abstract

It is being now globally recognized that medicinal plants play a major role in providing health benefits to human beings. Maximum Ayurvedic medicines are plant based drugs. The complex composition of medicinal plant based drugs has a major challenge for quality control. Physico-chemical study is the most important part for standardization of the medicinal plant base drugs. One important Ayurvedic drugs i.e. Alambushadi Churna tablet had been selected from Ayurvedic famous book named Bhava Prakasha for the Physico-chemical study. It is mainly used in the treatment of disease Amavata (Rheumatoid arthritis). The Physico-chemical study revealed that the Alambushadi Churna tablet contained more moisture, less inorganic constituents and more water soluble constituents

.Keywords

Alambushadi, Churna, Amavata, Rheumatoid arthritis



Greentree Group

Received 10/6/15 Accepted 28/6/15 Published 10/7/15

INTRODUCTION

The benefit of medicinal plants for utilizing is being globally recognized for providing health benefits to human beings. The increased demand for plant based drugs and their eventual commercialization has given a more concentration on their status. Maximum Ayurvedic medicines are plant based drugs. But global acceptances of Indian plant based drugs are still low and perhaps inadequacy of quality control is the most important responsible factor for this. The complex composition of medicinal plant based drugs has a major challenge for quality control. These days Analytical study is the most important way for standardization of the medicinal plant based drugs. Analytical study has two parts those are Physico-chemical study and Phyto-chemical study. There are many plant based drugs described in Ayurvedic classics in context of treatment purpose of different diseases. One of them is *Alambusadi Churna* tablet which has been selected from Ayurvedic book for the Physico-chemical study.

Objectives: I) To evaluate the Physico-chemical data of the *Alambushadi churna* tablet.

MATERIALS AND METHODS

Alambusadi Churna tablet is commonly used by Ayurvedic physician and it is mainly used in the treatment of disease *Amavata* (Rheumatoid arthritis). *Amavata* disease is more simulated to Rheumatoid arthritis according to its clinical manifestations and pathogenesis^{1,2}. *Alambusadi churna* is mentioned in *slokas* no. 69 to 70 of 26th chapter of *Bhava Prakasha* (Ayurvedic book)³. *Alambusadi Churna* tablet was prepared in the Pharmacy of Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurvedic University, Jamnagar and also Physico-chemical study of this drug (i.e. *Alambusadi Churna* tablet) has been done in the Pharmaceutical laboratory of Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar. Uniformity of tablet / pill (weight variation) (average weight), Hardness of tablet/ pill (average), Disintegration time of tablet/ pill, Determination of Loss on drying at 110 °C, Ash value (% of total ash), Acid insoluble ash value, Water soluble extractive value and Methanol soluble extractive value of *Alambusadi Churna* tablet had been observed in Physico-chemical study⁴. *Alambushadi churna* tablet is a poly herbal Ayurvedic drugs and thirteen Ayurvedic medicinal plants are used in it as an ingredient^{5,6}. Name of the ingredients (Ayurvedic name and Scientific or

Botanical name), used part of the plant and quantity into the one tablet are shown in the Table 1.

Table1: Ingredients list of Alambushadi Churna tablet

S. No.	Ingredients (Ayurvedic name)	Botanical Name	Used part	Q.)
1	Alambusha	<i>Sphaeranthus indicus</i> Linn.	Dried mature whole plant	1
2	Gokshur	<i>Tribulus terrestris</i> Linn.	Dried mature Fruit	1
3	Guduchi	<i>Tinospora cordifolia</i>	Dried Stem	1
4	Vridhdadar aka	<i>Argyreia nervosa</i> (Burm.f.) Bojer	Dried Root	1
5	Pippali	<i>Piper longum</i> Linn.	Dried mature Fruit	1
6	Trivrit	<i>Operculina terpathum</i> Linn.	Dried Root	1
7	Mustaka	<i>Cyperus rotundus</i> Linn.	Dried Rhizome	1
8	Varuna	<i>Crataeva nurvala</i> Buch-Ham.	Dried stem Bark	1
9	Punarnava	<i>Boerhavia diffusa</i> Linn.	Dried mature whole plant	1
10	Haritaki	<i>Terminalia chebula</i> Retz.	Dried mature	1

.	.	.	Fruit	.
1	<i>Amalaki</i>	<i>Emblica officinalis</i> Gaertn.	Dried mature	1
.	.	.	Fruit	.
1	<i>Vibhitaka</i>	<i>Terminalia bellirica</i> Roxb.	Dried mature	1
2	.	.	Fruit	.
1	<i>Sunthi</i>	<i>Zingiber officinale</i> Roxb.	Dried Rhizome	1
3

RESULTS AND DISCUSSION

Result of Physico-chemical study of *Alambushadi Churna* tablet is shown in the Table 2.

Table 2 Data of Physico-chemical parameters (Quantitative test) of Alambushadi Churna tablet

S. No.	Parameter	Result
1.	Uniformity of tablet (weight variation) (average weight)	500.5 mg
2.	Hardness of tablet (average)	1.225 kg/ cm ²
3.	Disintegration time of tablet	5 minutes
4.	Determination of Loss on drying at 110 °C	4.80 % W/W
5.	Ash value (% of total ash)	9.75 % W/W
6.	Acid insoluble ash value	2.35 % W/W
7.	Water soluble extractive value	33.00 % W/W.

8.	Methanol soluble extractive value	13.20 % W/W
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The data of the above Table 1 shows that the average weight of *Alambushadi Churna* tablet was 500.5 mg., Hardness of the *Alambushadi Churna* tablet was 1.225 kg/cm², Disintegration time of this tablet was 5 minutes, Loss on drying of this tablet sample at 110 °C was 4.80 % W/W. Ash value of this tablet, Acid insoluble ash value, Water soluble extractive value and Methanol soluble extractive value of this tablet sample was found to be 9.75 % W/W, 2.35 % W/W, 33.00 % W/W, and 13.20 % W/W, respectively. On the basis of this information it can be said that the moisture holding capacity was more in the sample of *Alambushadi Churna* tablet therefore self life or storage capacity was less in *Alambushadi Churna* tablet. Inorganic constituents were not more in *Alambushadi Churna* tablet because it was made by herbal ingredients and so Ash value was not more. Water soluble constituents such as Sugars, Glycosides etc were more in *Alambushadi Churna* tablet, because Water soluble extractive value of its sample was more.

CONCLUSION

It can be concluded on the basis of this Physico-chemical study that the *Alambushadi Churna* tablet contained more moisture, less inorganic constituents and more water soluble

constituents but more research work is necessary on this subject for more information and more authenticity.

ACKNOWLEDGEMENT

Authors are grateful to the Vice chancellor, The Director, Experts and staff of the Pharmacy and the Pharmaceutical laboratory of the Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurvedic University, Jamnagar, for their continuous support and cooperation for this study.

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