

Process validation of chandrodayavarti

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ABSTRACT

Chandrodayavarti is a herbomineralophthalmic suppository. It is lekhanaanjana used in various eye ailments like cataract, pterygium, night blindness, itching, conjunctivitis etc. Chandrodayavarti constitutes 9 ingredients, in which 6 herbal, 1 mineral, 1 sea and 1 animal origin. Most of the ingredients of chandrodayavarti have katu, tikta, kashayaras, laghu, ruksha, tikshanaguna and lekhanityaproperties which are responsible to give best effect in lekhana karma and also have vatakahphashayamak properties. Chandrodayavarti was prepared having an average weight of churna 400gm and subjected to levigate with goat milk 800ml for 6 hrs. On an average 615 gm of finished product is obtained.

Keywords: chandrodayavarti, process validation

I. INTRODUCTION:

Validation of the individual steps of the process is called process validation. Process is developed in such way that the required parameters achieved and it ensures that the output of process will consistently meet the required parameters. India has a rich tradition of herbal medicine as evident from Ayurveda. As growing public interest in use of herbal medicines, it is necessary to development of modern and objective standards for evaluating quality of herbal medicines. Soit is a need of process validation in manufacturing of herbal drugs for control the quality of herbal drugs. Process validation helps to ensure product uniformity, reproducibility, quality and to make process economical. All these things keeping in mind an attempt has been made to validate the process of chandrodayavarti.

Chandrodayavarti is a classical herbomineral ophthalmic suppository. It is widely

used in various type of eye ailments like cataract, pterygium, night blindness, itching, conjunctivitis. Most of the ingredients of chandrodayavarti have katu, tikta, kashayaras, laghu, ruksha, tikshanaguna and lekhanityaproperties which are responsible to give best effect in lekhana karma. The ingredients and processes are almost same for the preparation of chandrodayavarti as per the reference available in different classical texts. By considering all points, an effort has been made to standardize & validate the method of preparation of chandrodayavarti for increasing its safety, efficacy and acceptance at global level.

II. MATERIALS AND METHODS:

Chandrodayavarti was prepared as per the reference available in sharangdhara Samhita.¹ Chandrodayavarti comprises of maricha, pippali, haritaki, vacha, kustha, bibhitaki, shanknabi, manshila. (table no.1). All the ingredients are taken in equal quantity, pounded with chagaksheera, made into varti and dried properly in sunlight. Raw materials of chandrodayavarti were identify on the basis of their macroscopic characters in the department of Dravya Guna in Rishikul Campus Haridwar.

Before the preparation of chandrodayavarti, all raw drugs were powdered individually and passed through mesh no.200 size. All materials mixed together in equal proportion 50gm each and subjected to levigation with the goat milk (800ml) for the duration of 6 hrs. After completion of levigation 60 ml syringe was taken then poured the prepared material inside the syringe, push the syringe in downwards direction then 3mm in diameter and 8.1mg in weight a

cylindrical shaped suppositories was prepared and subjected to the drying in oven at 40^oc.

III. RESULTS AND DISCUSSION:

Shodithmanashilapurchased from hans pharmacy sidcul Haridwar.SankhNabhi is animal origin drug which is found in sea water. Due to

long exposure of sea water a coating was developed on outer layer and excreta of animal were deposited inner layer of the shankhnabhi. Shodithshankhnabhi powder bought from Anamika pharmacy sidcul Haridwar.

Table no: 1 Ingredients of Chandrodayavarti:

Sr. No	Drug	Latin name	Part used	Proportion
1.	Maricha	Pipernigrum	Fruit	1 part
2.	Pippali	Piper longum	Fruit	1 part
3.	Kustha	Saussurealappa	Root	1 part
4.	Vacha	Acorus calamus	Rhizome	1 part
5.	Haritaki	Terminalia Chebula	Fruit	1 part
6.	Bibhitaki	Terminalia Bellerica	Endosperm	1 part
7.	Manashila	Realgar	Mineral	1 part
8.	Shankhnabi	Conch shell	Nabhi	1 part
9.	Chagaksheera		Milk	Q.S

All the powder of each ingredients mixed together in equal amount i.e50 gm each. The color of powder after mixing of all ingredients became orange. Before levigation, the mass of ingredients completely dipped under Aja dugdha. During levigation, it was difficult to reduce the particle size of herbal drugs further due to the presence of

fibresof raw materials and same in case of sankhnabhi due to it hard nature. Pleasant smell was felt during levigation from bhavitamaterial. Initially the color of paste was orange, which is ultimately turned to brown color. After completion of levigation process vartiwas prepared in shape of cylindrical.

Table no:2 Ingredients and their quantity for ChandrodayaVarti Preparation:

Sr.no	Drug	Quantity (weight in gm)
1.	Maricha	50gm
2.	Pippali	50gm
3.	Kustha	50gm
4.	Vacha	50gm
5.	Haritaki	50gm
6.	Bibhitaki	50gm
7.	Manashila	50gm
8.	Shankhnabi	50gm
9.	Chagaksheera	800ml

Table no.3 Color of Ingredients:

Sr.no	Ingredients	Color
1.	ShodhitManashila	Orange
2.	ShodhitShankhnabi	White
3.	Maricha	Black
4.	Pippali	Dark brown
5.	Kustha	Creamy white
6.	Vacha	Creamy white
7.	Haritaki	Brown
8.	Bibhitaki	Brown

Table no.4 Result of Chandrodayavarti preparation:

1.	Color of mixture of ingredients	Brown
2.	Weight of ingredients (gm)	400gm
3.	Amount of chagaksheera(ml)	800ml
4.	Color of final product	Brown
5.	Weight of final product (gm)	615gm
6.	Weight of per varti (mg)	8.1mg
7.	Diameter of varti	3mm
8.	Length of varti	7cm
9.	Total time for preparation of varti	7hr

IV. CONCLUSION:

Standardization and development of reliable protocols for quality control of ayurvedic formulation using modern techniques are extremely needed. The method of preparation mentioned in the current study for chandrodayavarti can be considered as standard. Approximately 800ml ajadugdha and 400 gm churnawere taken to prepare 500 varti of 615gm and an average 7 hr time was taken for preparation.

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