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Pharmaceutical Study of *Rasapushpadi Malahara* and its Modified Dosage Forms

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ABSTRACT

Malhara Kalpana (topical medicaments) is classified under *Bahya Kalpana* (external application). *Malhara* is anointment preparation meant for external application to the skin or to mucosal membrane. Rasapushpadi Malhara is one such preparation mentioned in *Rasa tarangini* containing ingredients like *parada, saindhava, kasisa* and *siktha taila* having indications like *Phiranga, Vicharchika* ,Vrana.After preparation of *Rasapushpa Siktha Taila* was added as a base for *Rasapushpadi Malahara*. Therefore, in this study, an attempt was made to modify Rasapushpadi Malhara into cream and lotion form.For Rasapushpadi Malahara sikta tail was used as base with 5% Active part *Rasa pushpa* to get cream coloured *Malhar* as per classics.During the formulationof *Rasapushadi cream*focus was on the following characteristic such as softening,thickening, richer texture and proper emulsification.During the preparation of*Rasapushapdi*lotion focus was on low viscosity, smoothness and easy spreadability. Separation of different media, cracking of material and high viscosity were also avoided. Quality control for ability and safety of pharmaceutical products is of predominant importance. So quality control test must be carried out for such products.

Key Words *Rasapushpadi Malhara, Rasapushpa, Cream. Lotion*

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INTRODUCTION

MalharaKalpana (topical medicaments) is classified under *Bahya Kalpana* (external application). *Malhara* is Ointment preparation. *Malhara* preparations are meant for external application to the skin or to mucosal membrane. The drugs are made into fine powder form, mixed with some liquid or other medium indicated in each preparation, and made into a soft paste before application. Wet medicinal drugs are made into *Kalka* (paste) form by adding little quantity of water/any other liquid and grinding. *Malhara* has some demerits such as its short shelf life and difficulty in handling. Hence, there is a need to modify the preparation to a patient-friendly form. *RasapushpadiMalhara* is one such preparation mentioned in *Rasa tarangini* containing ingredients like *parada, saindhava,*

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*kasisa and sikthat*aila having indications like *Phiranga, Vicharchika* ,*Vrana* etc[1]. *Rasapushpa* can be prepared by two methods.i.e. *kupipakwa* method[2] and *Damru yantra*[3] method. After preparation of *RasapushpaSikthaTaila*was added as a base for *RasapushpadiMalahara.* Therefore, in this study, an attempt was made to modify *RasapushpadiMalhara* into cream and lotion form. The current study sought to use the modern dosage form, Cream and Lotion, as a modified form for the *Malhara*, and thus the prepared Cream and Lotion was evaluated for its stability and *pharmacotherapeutically* potent properties.

AIMS AND OBJECTIVES

1. To prepare *Raspushpadimalhara* as per textual guidelines.
2. To prepare *Raspushpadi* cream, and *Raspushpadi* lotion as per modern textual guidelines .

MATERIALS AND METHODS:

Material: Raw materials i.e. *Parada*(Mercury), *Saindhava* , *Kasisa*, *Siktha*(Bee's wax), *Tiltaila* (Sesame oil) Paraffin Wax ,Emulsifying Wax , Bees Wax ,Cetyl Alcohol ,CetoStearyl Alcohol ,Glyceryl Mono Stearate (GMS) ,Stearic Acid,Iso Propyl Myristate (IPM) ,Glycerine, Distilled Water ,*Neem*fragrance, Sodiumbenzoate,petroleum jelly,Carbopol-940 were procured from Pharmacy, NIA, Jaipur.

Method:

1. A flow list depicting the various purification steps for treatment of raw materials and for the formulation of *RaspushpadiMalhara*,cream and lotionisshown underpharmaceuticalstudy.

2. Prepared samples were evaluated on analyticalparameters.

PROCEDURE

Rasa pushpadimalahara, cream and lotion were prepared in the departmental lab of R.S& B.K. Department, NIA, Jaipur. Following steps were included in preparation of *Rasa pushpadiMalhara*, Cream and Lotion

1.Preparation of *Rasa pushpa*

2.Preparation of *Rasa pushpadiMalahara*

3.Preparation of *Rasapushpadi*Cream

4.Preparation of *Rasapushpadi* Lotion.

1.Preparation of *Rasa pushpa*

*Kupipakwa*method was used in the preparation of *Rasapushpa*:

Materials – By using this method following materials was used:

Drug: Parad - 150 *g*, Suddhakasisa- 150 *g*, Saindhava - 150*g*

Procedure:

1. At first *Shuddha, Parada, SuddhaKasisa* and Saindhava were weighed accurately and then mixed together in mortar and trituration was started. As long as trituration was going on, *Parada* was split up into smaller and smaller particals. At the end of 18 *h* of trituration, mercury particles were not seen by nakedeyes.

2. A pinch ofHomogenousMixture was taken, a drop of water was added and rubbed on palm with the index finger and then seen under sun light. It was lusterless i.e. the Mixture was free from

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mercury particles.

3. After that Mixturewas cautiously filled into the *Kachakupi*which had 7 layers of *Kapadamitti.* Then Valukayantra was placed exactly at the centre of the Bhastri. (Simple coal furnace). Then *Kupi*was placed exactly at the center of the *Valukayantra.*The mouth of the *Kupi* was closed temporarily with a cork and placed firmly in the *Valukayantra* with 2inche thick sand at the base and sand upto the neck in the surrounding. Pyrometer was placed just next to the bottom of *Kupi.* Temperature was recorded along with specific observations.

4. Agni of Mridu and Madhyam intensity was respectively given for three hours each to the Valukayantra containing the bottle.

5. Initialy cowdung cakes (wt. approx. 150 *g* each) were placed inside the *Bhastri* with 20 pieces of wooden coal (total wt. approx. 1 Kg) and 10 pieces of (total wt approx. 800*g*).

6. The cork of bottle was removed soon after beginning the heatingprocess.

Heat was increased gradually by adding coal pieces at regular interval of half hour and also as per the requirement. Temperature was recorded half hourly as mentioned in observation During the procedure, watery vapors along with fumes were expelled out from the mouth of *Kupi*initially and as the time passed, amount of vapours and fumes go tdecreased.

7. At last when watery vapours diminished completely then a Sita Salaka (iron rod) was introduced into the Kupi which had no the white granular coating of compound on it. However, after the heating period was completed and a copper coin test revealed the presence of free Hg particles on it, it was decided to cork the mouth of *Kupi*. So the cork of stone was sealed with *Kapadamitti.* The sand layer of about 2-3 inches surrounding the *Kupi*-neck was moved aside. After raising the temp for about 50ºC, *Bhastri* was left for*Swangasitikaran.*

8. After 18 hours when the *Bhastri*was *Swangasita,Kupi* was removed from the*Valukayantra.* The layer of *Kapadamitti* which were blackened removed by scrapping out with the help of Knife and the external surface of the Kupi was cleaned to mark the level of *Rasapushpa*compound.A thread Soaked in Kerosene was tied oneinch below the level of compound on the external surface of Kupi and set to fire. When the string was burnt, *Kupi* mainly the neck regionwas wrapped by a wet cloth. The Kupi was broken exactly at the level of string. *Rasapushpa* was found in the neck of Kupi. It was 75 *g*.At the bottom of bottle dark brown material was found that was collected separately.

OBSERVATIONS

At the end of about 18*h*. of trituration, the *Kajjali* became yellowish gray in colour. Mercury was not found by naked eyes i.e. *Kajjali* became *nischandra.* The heating process was started at 10:30 am at 37ºC. The specific observations during heating were as follows:

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Table 1 Specific observations during heating

Time in Hours	Temp. in ºC	Specific observations
1. ½ *h*	70ºC	Mixture was totally dried
2. 1 *h*	110ºC	Mixture was moisten
3. 2 *h*	130ºC	Watery Vapours started
4. 3 *h*	168ºC	Watery vapours and fumes started
5. 4 *h*	262ºC	Watery vapours and fumes increased
6. 5 *h*	320ºC	Watery vapours and fumes decreased
7. 5½ *h*	370ºC	Watery vapours stopped but sita Salaka test (-ve) and copper coin testshowed presence of Hg particles
8. 6 *h*	410ºC	Corking was done.

The *Kupi* became Swangasita after 18 hours.

2. Preparation of *Rasapushpadi malhara*[4]-

Materials: 1.Rasapushpa -30 g, 2.*Sikhta Taila* - 600g.

Procedure-

1. Fine powder of *Rasapushpa* was prepared by using mortar and pestle.

2. Then *SikthaTaia* was added slowly and also mixed slowly in one direction i.e clockwise in oeder to get uniformity in the*Malhara*.

OBSERVATION

1. The time required for the proper mixing of the *Sikhtataila* and the *Raspushpa* was 1*h*.

2. Creamcoloured product was obtained finally.

3 Preparation of Rasapushpadi Cream[5]:

Equipments: Steel vessels , Hand blender , Glass beakers , Heating Mantle , steel spoon , Weighing Machine , dropper.

Table 2 Ingredients of Rasapushpadi Cream

S. No.	INGREDIENT	FUNCTION'S	WEIGHT (g)	PERCENTAGE (%)
PHASE-A				
1.	Active (Rasapushpa)	Active	25.00 g	5.00 %
PHASE-B				
2.	Paraffin Wax	Thickener	13.50 g	2.70 %
3.	Emulsifying Wax	Emulsifier	13.50 g	2.70 %
4.	Bees Wax	Natural Thickener	08.75 g	1.75 %
5.	Cetyl Alcohol	Thickener	05.00 g	1.00 %
6.	CetoStearyl Alcohol	Emulsifier	13.50 g	2.70 %
7.	Glyceryl Mono Stearate (GMS)	Emulsifier	08.75 g	1.75 %
8.	Stearic Acid	Thickener	06.25 g	1.25 %
9.	Iso Propyl Myristate (IPM)	Emollient	15.00 g	3.00 %
PHASE-C				
10.	Glycerine	Humectants	08.75 g	1.75 %
11.	Distilled Water	Aqueous base	380 g	76.00 %
PHASE-D				
12.	Neem fragrance	Fragrance	02.50 g	0.50 %
13.	Sodium benzoate	Preservative	00.5 g	0.10 %
Total			500 g	100 %

Method: Preparation of Rasapushpadi Cream

Phase A: Weigh and kept separately.

Phase B: Weigh all ingredients of Phase B and mixing one by one all ingredients heat at 80-95o C temperature.

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Phase C: Weigh all theingredients of Phase C and add glycerine into water heat at 80-95o C.

Add phase B to phase C and blend well until smooth. After that add phase A into the mixture of phase B and C, then add final phase D in to final batch at room temperature.

Precautions

1. Each ingredient was mixed slowly and thoroughly after the previous ingredient was thoroughly mixed. The temperature of each phase during mixing was maintained equal

2. The Phases were mixed very slowly to avoid extra frothing and well emulsification.

3. Little by little mixing of contents was done.

4. Preparation of Rasapushpadi Lotion [6]

Equipments: Steel vessels, Hand blender , Glass beakers , Heating Mantle , steel spoon , Weighing Machine , dropper.

Table 3 Ingredients of Rasapushpadi Lotion

S. No.	INGREDIENT	FUNCTION'S	WEIGHT (g)	PERCENTAGE (%)
PHASE-A				
1.	Active (Rasapushpa)	Active	25.00 g	5.00 %
PHASE-B				
2.	Light Liquid Parafin	Emollient	45.00 g	9.00 %
3.	CetoSteraryl Alcohol	Emulsifier	05.00 g	1.00 %
4.	Stearic Acid	Thickener	02.50 g	0.50 %
5.	Glycerol Mono Sterate (GMS)	Emulsifier	05.00 g	1.00 %
6.	Cetyl Alcohol	Thickener	05.00 g	1.00 %
7.	Iso Propyl Myristrate (IPM)	Emollient	25.00 g	5.00 %
8.	Emulsifying Wax	Emulsifier	07.50 g	1.50 %
9.	Petrolium Jelly	Emollient	10.00 g	2.00 %
PHASE-C				
10.	Glycerine	Humectants	25.00 g	5.00 %
11.	Carbopol 940	Gelling agent	01.00 g	0.20 %
12.	Distilled Water	Aqueous base	339 g	67.80 %
PHASE-D				
13.	Neem fragrance	Fragrance	02.50 g	0.50 %
14.	Sodium benzoate	Preservative	02.50 g	0.50%
Total			500 g	100 %

Method:

Phase A: Weigh and kept separately.

Phase B: Weigh all ingredients of Phase B and mixing one by one all ingredients heat at 80-95ºC temperature.

Phase C: Weight all ingredients of Phase C and Carbopol 940 soaked in water for 24 hr then add glycerin, heat at 80-95ºC.

Add phase B to phase C and blend well until smooth. After that add phase A in to mixed phase B and C, then add phase D into final batch at room temperature. And blending or homogenize well. After complete cool, store in container and packed tight.

Precautions:

1. Each ingredient was mixed slowly and only after the previous was mixed well .
2. The temperature of each phase during mixing was maintained equal .

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3. The Phases were mixed very slowly to avoid extra frothing and well emulsification.
4. Little by little mixing of contents is done.

DISCUSSION

The pharmaceutical study in the present work was carried out as per the references in the light of classic and modern technology. For *Rasapushpadi Malahara* first of all sikta tail was prepared with ratio of the *sikhta* and the tila tail was taken as 1:5, respectively considering summer season then added 5 % Active part *Rasa pushpa* to get cream coloured Malhar as per classics as mentioned in Table no.1. During the formulation of *Rasapushadi cream*as mentioned in Table no.2focus was on the following characteristic such as softening, thickening, richer texture and proper emulsification. Efforts were made to avoid cracking, separation and thinner. A lotion is low viscositytopical preparation intended for application to the skin, during the preparation of *Rasapushapdi lotion* as mentioned in Table no.3 focus was on low viscosity, smoothness and easy spreadability. Cracking, separation and high viscosity were also avoided. There are many cosmetics ingredients available in the market which have long been shown to be harsh and irritating to skin. Using quality ingredients for the preparation of pharmaceutical cream and lotion.

CONCLUSION

The ability to desire the right formulation for you depends on accurate ingredient knowledge, body Prakriti assessment, personal needs, customer perception about product, benchmark product. Quality control for ability and safety of pharmaceutical products is of predominant importance. So quality control test must be carried out for such products. Cream and Lotion were prepared at effective concentration 2% (w/v) for lotion and cream dispersion for lotion and gel and emulsification for cream using different excipients. These topical formulations were tested for pH, viscosity, spreadability, drug contents uniformity, in vitro diffusion. The stability study was carried out at 25 and 40°C with 75±5%RH for one month. All formulations were found to have satisfactory firmness.

REFERENCES

1. Sharma Sadanand, Rasatarangini, 11th edition reprint 2014, MotilalBanarasi Das, Delhi, 11th edition, 6/54-55.page 113
2. Sharma Sadanand , Rasatarangini, 11th edition reprint 2014, MotilalBanarasi Das Delhi, 6/29-31, page 108
3. Sharma Sadanand ,Rasatarangini, 11th edition reprint 2014, MotilalBanarasi Das, Delhi, 6/32-38, page 109.
4. Sharma Sadanand, Rasa Tarangini, Hindi Commentary By Pt. KashinathShastri, Edition 11th, MotilalBanarasidas, Delhi, Page no. 113, Verse – 6 / 54-55
5. Sharma P.P. ,Cosmetic – Formulation, Manufacturing and Quality control.