Indian Journal of Agriculture and Allied Sciences
A Refereed Research Journal

ISSN 2395-1109
e-ISSN 2455-9709
Volume: 3, No.: 1, Year: 2017

www.mrfsw.org

Received: 15.03.2017, Accepted: 25.03.2017

STANDARD MANUFACTURING PROCESS OF *VIJAYANANDA RASA*

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Abstract: *Rasa chikitsa was considered to be the most effective and time saving therapy. The preparation used under rasa chikitsa being palatable, well preferred over other formulations for oral administration.In the Ayurvedic system of medicine, Shwitra has been listed to be the worst amongst kustha to cause disfigurement of the body. According to Acharya Vagbhata, Shwitra has been described as much more dangerous than kustha because it become Asadhya very quickly as like burning home. Vitiligo is a common pigmentary disorder of great socio-medical importance. It is defined as circumscribed, acquired, ediopathic, progressive hypomelanosis of a skin and hair. This disease affect male and female equally. The usual age of onset is between 10-30 years old, but the condition can start at any age.*

In the Ayurvedic system of medicine so many compounds has been described in our classics in the treatment of Shwitra. One of the most popular compound which has been widely used by so many traditional vaidyas i.e. Vijayananda Rasa .Haratala, Parada and Palaasha mixed compound selected for the present study seems to safe & could be welcomed achievement for millions of Vitiligo patients. Out of three patients of Vijayananda rasa [Ref:Rasendra sarsangrah-Shwitra chikitsa-2/113-117] all are kusthagna & pittavardhaka. They may increase the bhrajaka pitta of skin , helping in varnotpatti because varna-loss is the main complaint of the patient.

Keywords: *Vijayananda rasa, Shwitra, Standardization.*

Introduction: *Rasa*'s the branch of Ayurveda which deals with the pharmaceutical perception of *rasoushadhis.* The main concept of *Rasashastra* is to transform lower metals (Lead, Tin, Copper, Iron, Zinc) into higher metals (Gold, Silver) & to strengthen the body tissue & maintain in a fresh and healthy state so as to remove poverty, senility, disease & death from the world. Besides these disease curing aspect which also included.

Rasa preparations have the advantage of being effective in a smaller dose than the herbal preparations. In *Rasashastra* the metals & minerals are also termed as *Dhatu & Upadhatu* because of their specific role in biological system i.e. these can sustained body tissue by supplementing some of the essential elements to the tissue , whose deficiency causes many disease in the body. Thus it can be said that on account of above mentioned qualities & properties, the use of drug of metals & mineral origin has become more frequent than the use of drug of herbal origin.

In the Ayurvedic system of medicine so many compounds has been described in our classics in the treatment of *Shwitra.* Here we have first time selected the drug for point of research i.e. *Vijayananda rasa*. *Hartala, Parada & Palasha* mixed compound selected for the present study seems to be safe & could be welcomed achievement for millions of vitiligo patients. Out of three ingredients of *Vijayananda rasa* [Ref:*Rasendrasar sangraha*] all are *kusthaghna &pittavardhak*a. They may be increase the *Bhrajakapitta* of the skin, helping in *varnotpatti* because *varna*-loss is the main complaint of the patient.

Aims & Objectives: To develop Standard Manufacturing Process and Analytical profile of *Vijayananda rasa.*

Pharmaceutical study of *Vijayananda Rasa*: In Pharmaceutical process, *Shodhana* is an

important concept in Rasashastra, it is said that every drug should be subjected for *Shodhana* before its internal use and *Parada* is no exception. Acharya Nagarjuna and other Acharyas frequently used *Parada* for preparation of ayurvedic *rasaushadhis*. The *Parada murchhita rasaushadhis* having potency to eradicate chronic diseases in lesser dosage of the drug or compound. Owing to its origin or other causes, Mercury is likely to be associated with different types of impurities of various degrees. Though many *dosha*'s are attributed to *Parada* (Mercury) – *Naaga*(Lead) and *Vanga* (Tin) doshas are considered the major ones. With the help of advanced chemical analytical techniques, quantitative detection of Lead and Tin contents in Mercury is possible today. Not only this but efficacy of purificatory methods can be assessed by observing the reduction in percentage of Lead and Tin content in processed Mercury. Purification of *Parada* potenciates the compound here named *Vijayananda rasa*.

Materials and Methods: The whole pharmaceutical study of *Vijayananda rasa* is divided into following steps-(1) *Samanya Shodhana* of *Parada*, (2) *Shodhana* of *Haratala*, (3) Preparation of *Palasha Bhasma*, (4) Preparation of *Vijayananda rasa* (*Agni-Samyoga*). All raw materials were collected from Sundar Ayurved Pharmacy, J.S. Ayurveda Mahavidhyalaya, Nadiad.

Process Validation of *Samanya Shodhana of Parada* (Ref- R.T.- 5/27-29)

Equipments: *Khalvayantra*, Gase-stove, Small pots, Cowdungcakes, Spoon, Weighing machine, S.S. plate, Cotton cloth, Multani mitti.

Procedure: *Asuddha Parada* and *Sudha churna* in equal quantity were mixed in *Khalvayantra* and triturated for 24 hours. Then the mixture was washed with warm water and *Parada* was separated from *sudha churna*. In that *Parada* equal quantity of *Lasuna kalka* and half quantity of *Saindhava lavana* was added. This mixture was triturated till *Lasuna kalka* got black colour. After that mixture was washed with warm water and *Parada* was filtered by a cotton cloth, at that time shining of *Parada* increases after the Shodhana process. *Parada* was collected and used for the further process in preparation of *Vijayananda rasa*.

Table-1: Showing *Samanya shodhana of Parada* [1]

S.N.	Ingredients	Quantity (g) Batch			Final Wt (g) of *Shuddha Parada*			Obtained quantity of *Shodhit Parada* in %		
		A	**B**	**C**	**A**	**B**	**C**	**A**	**B**	**C**
1.	*Ashuddha Parada*	300	300	300	252	254	254	16%↓	15.3%↓	15.3%↓
2.	*Sudha churna* (Lime powder)	300	300	300	…..	…..	…..	…..	…..	…..
3.	*Nistusha Lasuna* (Garlic)	300	300	300	…..	…..	…..	…..	…..	…..
4.	*Saidhava lavana* (Rock salt)	150	150	150	…..	…..	…..	…..	…..	…..
5.	Hot water	Q.S.	Q.S.	Q.S.	…..	…..	…..	…..	…..	…..

Process validation of *Haratala Shodhana* (Ref- R.S.S.-1/179)

Equipments: *Khalvayantra*, S.S.Vessel, L.P.G.Gas, Cotton cloth, Weighing machine, Measuring Flask, Iron rod, Thread, Spoon.

Procedure: The *Ashuddha Haratala* was broken into small particles and made a *pottali* in the cotton cloth with the help of thread. The *pottli* was to be hanged in the liquid media – *Churnodaka, Kushmanda Swarasa and Tila taila* respectively for three hours in each media.

Table-2: Showing Process validation of *Haratala Shodhana* [2,3]

S. N.	*Ashuddha Haratala* (g)			Liquid Media	Quantity (in L) in each Batch	Method	Duration (Hrs)	Final Wt (g) of Shuddha Haratala			Loss in % after Sodhana of Haratala		
	A	B	C					A	B	C	A	B	C
1.	150	150	150	*Churnodaka* (Lime Water	3 liters	*Dolayantra*	3	144↓	142↓	146↓	4.0%↓	5.3↓	2.6%↓
2.	144	142	146	*Kushmanda swarasa*	5 liters	*Dolayantra*	3	142↓	139↓	144↓	1.3%↓	2.1%↓	1.3%↓
3.	142	139	144	*Tila taila* (Sesame oil)	4 liters	*Dolayantra*	3	136↓	130↓	137↓	4.2%↓	6.4%↓	4.9%↓

Process Validation of *Palasha Bhasma (Antardhum vidhi)*

Equipments: S.S.Vessel, Iron pan, L.P.G.Gas, *Khalvayantra*, Weighing machine, Glass bottle.

Procedure: At first take dry *Palasha panchanga* in Iron vessel and close the vessel by putting iron pan over it. Then ignite the fire in *Palasha panchanga* Solwly. When all the material converted in ash form, allow it for self cooling. Collect the material, powdered well and fill it in a glass bottle.

Table-3: Showing the process validation of *Palasha* Bhasma

Palasha Panchang	Wet Form	After Drying in a shadow	After Ignition Loss in %
Colour	Greenish Brown	Dark Brown	Ash colour
Quantity	15 kg	9.5 kg	3.5 kg (63%↓)

Process Validation of *Vijayananda Rasa* [4]

Equipments: *Khalvayantra, Handi, Sharava, Multani mitti,* S.S.Vessel, Weighing machine, Measuring Flask, Cotton cloth, Spoon, L.P.G.Gas, Digital Thermometer, Glass bottle.

Procedure: At first 50 g. of *Shuddha Parada* and 100 g. of *Shuddha Haratala* taken in a *Loha khalvayantra*, mixture was triturated well.When mixture got triturated more, fineness and lightness of the mixture increases. Trituration was continued for 24 hours (6 days in each batch) till the mixture got dark black in colour and no shining particles are observed in it. *Chakrika*s of the mixture were made with the help of water, having lengh-1 inch,Thickness-5mm. After that an earthen pot was to be taken, 100 g. of *Palasha bhasma* spreaded at bottom of the pot and *Chakrika's* were placed over it. The remaining 200 g. of *Palashaa bhasma* spreaded over the *Chakrika's*. *Sandhibandhana* of a pot should be done with the help of *Sharava, Mulatanimitti* & Cotton cloth. The earthen pot was to be kept on fire for 72 hours. After self cooling *Sandhibandhana* had removed collect the material, trirurated well in *Khalvayantra* ,Weight and stored well in airtight glass bottle.

Table-4: Showing weight of *Vijayananda rasa* before and after *Agni-samyoga*

Weight of *Vijayananda rasa*	Batch – A	Batch – B	Batch – C
Before *Agni-samyoga [Kajjali (Parada+ Haratala)]*	146 g.	148	147 g.
After *Agni-samyoga*	133 g.	137 g.	137 g.
Loss	13 g.	11 g.	10 g.
Loss in %	8.9 % ↓	7.4 % ↓	6.8 % ↓

Observation & Results

***Haratala Shodhana in Churnodaka*:** At first *Ashuddha Haratala* was brocken into medium small particles and make a *pottali* for *Dolayantra* method. The *pottali* kept in a vessel containing *Churnodaka* with the help of a rod. Heat was applied for 3 hours. After selfcooling *Haratala* was washed with hot water and kept for drying in shadow.

***Haratala Shodhana* in *Kushmanda Swarasa*:** The *Pottali* was to be made up of *Churnodaka shodhit haratal*a, hanged in a vessel containing *Kushmanda Swarasa* with the help of rod .Fragrant smell of *Kushmanda* came out on heating. Heat was applied for 3 hours. After selfcooling *Haratala* was washed with hot water and kept for drying in shadow. The yellow colored shinings were observed after *Shodhana* in *Kushmanda Swarasa*.

Haratala Shodhana in Tila taila – The *Pottali* was to be made up of *Kusmanda Swarasa Shodhita Haratala* , hanged in a vessel containing *Tila taila* with the help of rod. Heat was applied for 3 hours. After selfcooling *Haratala* was washed with hot water and kept for drying in shadow. The yellow colored shinings diminished after *Shodhana in Tilataila*.

Table-5 : Showing the organoleptic characters of *Ashuddha & Shuddha Haratala*

S.No.	TEST	*Ashuddha Hartala*	*Shuddha Hartala*
1.	Appearance	Dirty yellow stury	Bright yellow stury
2.	Colour	Dirty yellow in shining layers	Golden yellow with shining
3.	Touch	In layers rough in touch	In layers soft in touch
4.	Smell	Slight irritable odour	Odourless
5.	Taste	Tastelessness	Tastelessness

Table-6: Showing Organoleptic characters of *Vijayananda rasa*

S.No.	Test of *vijayananda rasa*	APPEARANCE
1.	Appearance	Fine ash like powder
2.	Colour	Ash colour
3.	Touch	Smooth
4.	Smell	Odourless
5.	Test	Tastless

Table-7: Showing Pharmaceutical standardization of *Vijayananda rasa*(VJR)

S.No.	Analytical Parameter of VJR	BATCH - A	BATCH – B	BATCH - C
1.	pH Value [5]	7.85	7.84	7.86
2.	Ash Value[6]	25.5 % w/w	24.9 % w/w	25.4 % w/w
3.	Acid insoluble Ash [6]	4 % w/w	3.5 % w/w	4.1 % w/w
4.	Alcohol soluble extractive Value [7]	30.4 % v/w	31.2 % v/w	30.4 % v/w
5.	Water soluble extractive Value [7]	22.4 % v/w	22.8 % v/w	21.4 % v/w
6.	Loss on Drying [8]	0.9 % w/w	0.8 % w/w	0.9 % w/w

7.	Water soluble Ash [9]	20.5 % w/w	19.8 % w/w	20.6 % w/w
8.	Sulphated Ash [9]	87.5 % w/w	88.6 % w/w	87.2 % w/w
9.	Spreadability [10]	0.189 gm cm/sec	0.192 gm cm/sec	0.188 gm cm/sec
10.	Carbon di sulphide extractive Value [11]	0.3 % w/w	0.2 % w/w	0.3 % w/w

Table-7 : Showing the Heavy metal Analysis of *Vijayananda rasa*(VJR)

Sample ID	Test Parameter	Testing Method	Name of the Instrument	Results (mg/kg) ppm
VJR	Arsenic	In House	ICP-OES	173230.0
	Mercury	In House	ICP-OES	129530.0
	Lead	In House	ICP-OES	24.140
	Cadmium	In House	ICP-OES	5354.9

Discussion

Vijayananda rasa is very potent drug in Ayurveda for the treatment of *Shwitra*. At present due to unhygienic *Ahara-Vihara, Shwitra* is a common disease in the world. In modern medicine there is a no permanent remedies to cure the Vitiligo (*Shwitra*). In the Ayurvedic system of medicine so many compounds has been described in our classics in the treatment of *Shwitra*. One of the most popular compound*Vijayananda rasa* is selected in relation to safety and efficacy purpose. *Vijayananda rasa* also standardized on our classical basis as well as modern parameters. For the validation of classical method of preparation we have adopted modern parameters for e.g. Organoleptic, Physico-chemical analysis etc. to prove its efficacy, safety as well as clinical evaluation.

Conclusion: The *Vijayananda rasa* described in Rasendrasarsamgraha in *Shwitra Chikitsa*-2/113-117 and indication of *Vijayananda rasa* is to cure the *Shwitra*(Vitiligo). To verify the indication of our classics S.M.P. of the product must be proved for its indication. The heavy metal analysis and Physico-chemical parameters shows its safety, efficacy and clinical evaluation.

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