



Research articles

**Pharmaceutical and physio-chemical study of shiladhatri yoga (kalpit)**

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**ABSTRACT**

Ayurveda is a time-tested science. It is based on universal principles of nature, in ancient times it is mainly flourished through the herbal drugs but later the drugs failed to conquer the difficult disease conditions. Hence humans started searching for alternate natural resources. In this search a separate discipline was emerged oriented towards use of metals, minerals, and animal and plant products, designated as Rasa Shastra. Later, it flourished and superseded the herbal medicines. In the classics they mention that one can make his own drug by using his knowledge for any disease condition. That's why here new drug Shiladhatri yoga (Kalpit) is formed for use in the treatment of Diabetes.

**Keywords:** Ayurveda, Rasashastra, Kalpit, Shiladhatri, Yashad, Shodhan.

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**INTRODUCTION**

The art of healing existed from the prehistoric period. Initially it started as observation, by administering various materials from nature, especially from plants, in different forms in the ailed and found effective in curing them. The drugs from the herbal source were more prevalent during the post Vedic period, but failed to conquer the difficult disease condition. Hence humans started searching on other natural resources [1-3]. In this search a separate discipline emerged oriented towards use of metals, minerals, and animal and plant products, designated as Rasa Shastra. Later it flourished and superseded the herbal medicines. The popularity it attained because of certain specific qualities of the medicines, like free from palatability problems, quick relief and prompt action, by directly assimilating into the plasma/ahararasa thereby not only curing the incurable diseases but also making the body a stable one [4-6]. In the classics they mention that one can make his own drug by using his knowledge for any disease condition [1]. That's why here a new drug is formed for use in the treatment of Diabetes. The content of drug is well described in the classics [7-9].

**MATERIAL AND METHOD**

The required raw drugs were purchased from the local market. The raw drugs were analyzed through the classical parameters by the experts of Rasashastra and Dravyaguna department [10-11]. The material for which shodhana or maran required was done. The study has got the Ethical clearance from

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**Ingredients**

Table No. I. Showing the content and their ratio

Name of content	Parts mixed
Swarnamakshik	1
Yasad	1
Shilajatu	2
Triphala	1
Haridra	2
Neem	1
Meshshringi	1
Vijaysaar	2
Guduchi	2
Kutaki	½
Methika	1
Kankol	1
Jambu	1
Tejpatra	2
Karpura	2
Karvellaka	Q. s

**Preparation of Shiladhatri Yoga**

Juice of karvellaka [2] was prepared by grinding and squeezing.

Aqueous Extracts [3] of herbal contents was prepared.

Shodhan of Shilajatu [4] of was carried out.

Shodhan [6], Jaran [5] and Maran [7] of Yasada was carried out.

Shodhan [8] and Maran [9] of Swarnamakshik was carried out.

All the contents were mixed in a pattern. Then 145 ml of karvellaka juice used for 3 Bhavana [12]. Obtained Material was dried in hot air oven at 50°C. At last material was used for the further study.

Table 2: Showing the Final wt. results after shodhan, maran etc. of raw drugs.

Name	Initial Weight	Final weight.	No. of puta
Swarnamakshik	125gm	92gm	38
Yasada	200gm	189gm	7
Shilajatu	600gm	184gm	-

Table 3: Showing the results of aqueous extracts of herbal drugs

Name	Raw drug wt.	Water used in ml	Decoction filtered in ml	Final wt. of extract. In gm
Vijaysaar	100	1600	200	20
Guduchi	200	2400	400	28
Triphala	300	4800	600	36
Methika	100	1600	200	19
Kankol	100	1600	200	18
Haridra	200	3200	400	26
Jambu Beej	100	1600	200	14
Neemb Beej	100	1600	200	17
Kutaki	50	800	100	15
Meshshringi	100	1600	200	19
Tejpatra	100	1600	200	16

## RESULT AND DISCUSSION

All the analytical process which has been carried out at the time of this study is explained here.

Table 4: Showing the results of organoleptic parameters.

Appearance	Colour	Taste	Odour	Touch
Powder	Brown	Tikta-Camphorish	Champhorish & other herbal extract	Coarse to Fine

Table 5: Showing the results of different physicochemical parameters

H <sup>10</sup>	OD <sup>11</sup>	Total Ash <sup>12</sup>	after Soluble Ash <sup>13</sup>	Acid Insoluble Ash <sup>14</sup>	Water Soluble Extractives <sup>15</sup>	Alcohol Soluble Extractives <sup>16</sup>
6.8	5.6%	25.15%	17.9%	3.9%	55.76%	12.8%

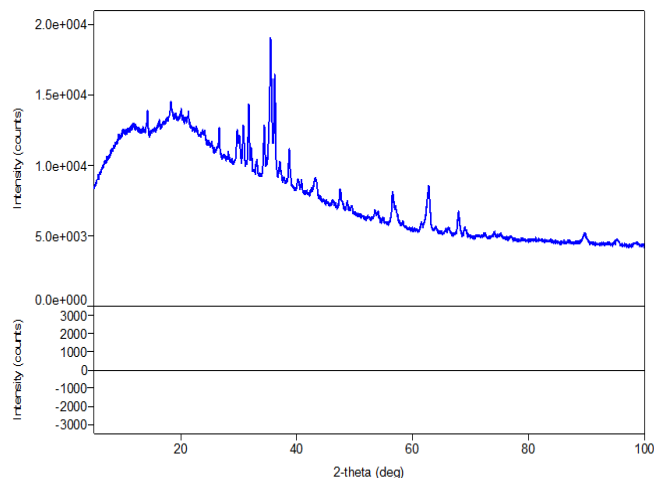
Figure 1: XRD<sup>17</sup> Graph of the drug shows this pattern

Table 5: Interpretation of graph shows.

Compound name	2 <sup>θ</sup> Value	d spacing	Intensity
Cu <sub>2</sub> S	24.050	3.6974	4245
Fe <sub>2</sub> S	33.0892	2.705	15152
Fe <sub>3</sub> O <sub>4</sub>	35.519	2.525	10592
Fe <sub>3</sub> O <sub>4</sub>	35.845	2.5031	7156
SiO <sub>2</sub>	38.624	2.3292	5251
ZnS	40.772	2.2113	3013
ZnS	48.624	1.8710	2135
CuO	49.361	1.84477	5126
FeSO <sub>4</sub>	53.975	1.69744	6025
Fe <sub>3</sub> O <sub>4</sub>	62.319	1.48871	5437
Cu <sub>2</sub> S	63.906	1.45553	4340

Sharp single peaks show that major compounds of Iron, Copper, Silica, Sulphur and Zin

## DISCUSSION

Shiladhatri Yoga prepared here is not mentioned in any classics. Although for the processing of different ingredients the classical guidelines were followed where they comply. At places where they comply the process repeated until the desired results were obtained as in the case of Swarnamakshik maran<sup>[13-14]</sup>. It takes 38 cycles of puta to get converted in the desired quality bhasma. In case of Yasada the method used for the Samanya Shodhana<sup>6</sup> is that mentioned by Rasaratnasammucchya i.e., for the all the metals 7 times quenching in Taila, Takra, Gomutra, Kanji and Kullatha Kwatha. The method followed for the aqueous extraction<sup>18</sup> is that mentioned by Sharangdhara Samhita i.e., Kwathana\Ghana<sup>[15-16]</sup>. The method followed for the extraction of karvellaka juice<sup>2</sup> extraction is that mentioned by Charaka and Sharangdhara Samhita i.e. Nishpidan.

## CONCLUSION

It can be concluded that the process should be used as standard manufacturing process for further manufacturing of the Shiladhatri yoga and values of different parameters can be used as a reference value. Further preclinical and clinical studies should be carried out to validate and authentic the formulated compound.

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