

# Formulation Development and Evaluation of Herbal Tablet of *Diplocyclos palmatus* (L.) Jeffry.

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## ABSTRACT

*Diplocyclos palmatus* (L.) Jeffry. (Shivlingi), is a plant in the Cucurbitaceae family that has been utilized extensively in indigenous medicine due to its purported biological properties. The goal of the current study was to formulate herbal tablets for the treatment of inflammation that contained a hydro-alcoholic extract of *D. palmatus* (L.) Jeffry. The formulated herbal tablet underwent IP evaluation, and all the results were found satisfactory.

**Keywords:** *Diplocyclos palmatus* (L.) Jeffry., Flowers, Inflammation.

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## INTRODUCTION

*Diplocyclos palmatus*, also referred to as shivalingi, is an annual herbaceous climber that may reach heights of 3 to 4 metres and is a member of the Cucurbitaceae family. The herb is used by different Indian tribal cultures to treat a variety of illnesses and ailments.<sup>1</sup> Living mammalian tissues locally react by inflaming the injured area. It is a defense mechanism used by the body to stop or slow the spread of harmful chemicals. A variety of factors can cause the symptoms and tissue damage that go along with an inflammatory response. Such elements include the creation of granulomas, leukocyte infiltration, and edoema.<sup>2</sup>

The tribes and local people use the plant for the treatment of inflammation, therefore it was selected.

## MATERIAL AND METHODS

### Plant Material

Flowers of *D. palmatus*

### Extract

Hydro-alcoholic extract was taken.

### Formulation Development of herbal tablet

HAEDPF and various excipients as mentioned in Table 1 were taken (all in mg) and mixed properly after passed from mesh.

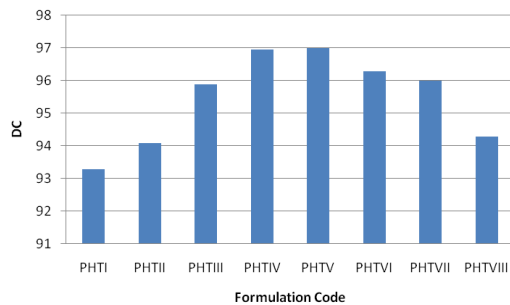
**Table 1:** Formulation design and composition of ingredients

Components	FC							
	PHTI	PHTII	PHTIII	PHTIV	PHTV	PHTVI	PHTVII	PHTVIII
HAE	100	100	100	100	100	100	100	100
SD Lactose	117	120	123	126	117	120	123	126
Talc	15	15	15	15	0	0	0	0
Starch (Potato)	18	15	12	9	18	15	12	9
Mg Sterate	0	0	0	0	15	15	15	15

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**Table 2:** Assessment of prepared formulation

Specification	HAEDPF							
	PHTI	PHTII	PHTIII	PHTIV	PHTV	PHTVI	PHTVII	PHTVIII
Strength (kg/cm <sup>2</sup> )	5.2	4.9	4.8	5.0	4.4	4.8	4.9	5.1
Friability	0.71	0.73	0.67	0.69	0.50	0.55	0.72	0.81
Weight variation	± 4.9	± 4.83	± 4.99	± 4.53	± 4.32	± 4.91	± 5.01	± 5.10
DT	22.10	25.20	30.15	45.15	12.20	18.30	22.10	30.15
DC	93.29	94.10	95.89	96.96	97.01	96.30	96.01	94.29

**Figure 1:** Drug content of herbal tablet

The powder mixtures were directly compressed using tablet punching machine using 10 mm flat shaped punch.<sup>3-5</sup>

#### Assessment parameters<sup>6</sup>

The formulated tablet was assessed for organoleptic properties, hardness, friability, weight variation, DT, drug content per the procedure mentioned in IP.

#### RESULTS AND DISCUSSION

The herbal tablet was prepared in eight batches, i.e., HT-1 to HT-8, and was assessed for its various parameters. Results showed that there were no any defects reported in all the prepared batches. The batch's color was brown, the odor was pleasant, and the taste was acceptable. The detailed results are mentioned in Table 2 and Figure 1.

#### CONCLUSION

In conclusion as per the results received it was revealed that the HT-5 has maximum drug content (97.01%), also the disintegration time of HT-5 is 12.20 minutes. Hence it was concluded that the HT-5 have found to be most suitable formulation and may be further investigated for anti-inflammatory activity to proven its efficacy.

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