



**Research Article**

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## Bio-absorption mapping of Caratol-E capsules-The science and brilliance of Siddha system of medicine

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### ABSTRACT

Caratol-e capsules was studied for its effect in altering the stomach ecosystem and found that caratol e capsules does not affect the same. The possible reason for the administration of two capsules in night may be due to its likely effect on melatonin –MSH interaction and this sufficiently explains the importance of caratol e capsules in the treatment of vitiligo and the importance such treatment during night hours as well. Findings of the study discussed in the paper.

**Keywords:**Caratol-e, capsules, Dissolution, Alpha MSH, Melatonin, Siddha system.

### INTRODUCTION

The science and brilliance of Siddha system of medicine is incredible and only when we journey deep into the system to unravel the mystery, we can discover and excavate the invaluable medical treasures and panacea of remedies that are available in the siddha system of medicine for various human ailments. Caratol-e capsules is a classic example that portrays the finest science of Siddha system of medicine. Caratol-e capsules is a proprietary siddha medicine of Dr.JRK's research and pharmaceuticals Pvt Ltd, given for the treatment of vitiligo.

The drug is composed of *Smilax chinensis*, *Withania somnifera*, *Elettaria cardamomum*, *Psoralea corylifolia*, *Embelia ribes*, *Piper longum*, *Conch turbinella rapa param*, *Linga chenduram*, *Ponnimilla ichenduram* and Excipients.

Dosage of the drug is 500 mg in the morning and 1000 mg during bed time before food. The science behind such dosage recommendation is not only quite amazing but also can beat the modern medical science. The dissolution assay has revealed the great science of caratol-e capsules, its absorption kinetics in stomach and intestine, pH interference and finally the therapeutic effect. Findings of the study are presented in the paper.

### MATERIALS AND METHODS

#### Dissolution of Caratol –E capsules in 0.1N HCl solution <sup>[1,2,3]</sup>

1 gm of Caratol e capsules powder was weighed accurately and added to 900 ml of 0.1N Hcl with pH 1.6 in a 1000 ml beaker.

The mixture was gently mixed for even distribution of the ingredients. Then, the mixture was stirred continuously using a magnetic stirrer at 100 rpm.

The stirring process was continued for 1 hour. At 5 min, 15 min, 30 min and 1 hour, 10 ml aliquot of sample was drawn and same was replaced at respective timing. Collected samples were filtered using Wattman No.1. The filtrate was read at 500 nm. Experiments are triplicated to confirm the findings.

#### Dissolution of Caratol –E capsules in water <sup>[6,7]</sup>

1 gm of Caratol–E capsules powder was weighed accurately and added to 900 ml of with pH 6.3 in a 1000 ml beaker.

The mixture was gently mixed for even distribution of the ingredients. Then, the mixture was stirred continuously using a magnetic stirrer at 100 rpm. The stirring process was continued for 1 hour.

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At 5 min, 15 min, 30 min and 1 hour, 10 ml aliquot of sample was drawn and same was replaced at respective timing. Collected samples were filtered using Wattman No.1. The filtrate was read at 500 nm. Experiments are triplicated to confirm the findings.

## RESULTS

The rate of dissolution of Caratol-E capsules was high at near neutral pH with maximum dissolution in 15 minutes' time. The rate of dissolution of caratol-E capsules was comparatively low in acidic pH however with time the dissolution got increased. (Table 1)

**Table 1:** The rate of dissolution of Caratol-E capsules and its effect on pH

Time (Minutes)	0.1 N HCl (initial pH of solvent -1.6)		pH (initial pH of solvent -6.3)	
	pH	OD	pH	OD
5	1.6	0.03	5.5	0.07
15	1.6	0.03	5.95	0.08
30	1.55	0.04	5.75	0.08
60	1.55	0.06	5.95	0.08

## DISCUSSION

The present study has thrown up undefeatable science of Siddha system of medicine in general and Caratol-E capsules in particular. The recommendation of Caratol-E before food gains its science from the fact that neither Caratol-E alter the acidic pH in the stomach nor did it get absorbed in the stomach environment. When such drug is recommended to be taken before food faster would be its clearance to intestine from stomach. At intestine the absorption of the capsule is expected to be high as its rate of dissolution was high at near neutral pH. Further caratol-E capsules also did not modify the pH of the intestine. Perhaps this science only would have led to such dosage regimen of Caratol-E capsules.

The question is why two capsules of Caratol-E capsules is recommended during bed time before food remain curious. Caratol-E capsules is given for the treatment of Vitiligo. The etiopathology of Vitiligo is although very difficult to understand but however the role of alpha MSH hormone in stimulating melanin synthesis is well known<sup>[4,5]</sup>. Drugs that would augment MSH activity are also chosen for the treatment of Vitiligo. The hormone melatonin is linked with sleep cycle and its secretion is influenced by circadian rhythm. Melatonin is secreted during night and interestingly it is known to inhibit alpha MSH especially during night. One of the possible reasons for the dosage of 2 BD caratol E during night may be to mediate between a melatonin and alpha MSH thus the effect of melatonin on alpha MSH is minimized in order to potentiate the therapeutic benefit of alpha MSH for Vitiligo. Although this possibility is not scientifically established but the existence of such science associated with Caratol-E capsules cannot be dismissed because of lack of any scientific proof.

Several postulates of Siddha system have great science but still lack scientific proof. But application of science has proved most of such postulates fall under the domain of either 'proto' or 'evolved' science.

## CONCLUSION

Findings of the above study clearly reveal the scientific credence and therapeutic benefit of Caratol-E capsules and how the extra-terrestrial wisdom of siddha system of medicine can beseech modern science.

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**Conflict of interest** – Authors have no conflict of interest.

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