



**Journal of Hospital Pharmacy**  
**An Official Publication of Bureau for Health & Education Status Upliftment**  
(Constitutionally Entitled as Health-Education, Bureau)

**Formulation and Evaluation of Artemether / Lumefantrine Oral  
Dispersible Tablet Specially Designed for Paediatric Use**

*Vaibhavkumar Jagtap<sup>1\*</sup>, Akshata Patil<sup>1</sup>, Pravin Netkar<sup>2</sup>, Shakeeb Akhtar<sup>3</sup>, Sufiyan Ahmad<sup>4</sup>*

<sup>1</sup>Department of Pharmaceutics, A. R. A. College of Pharmacy, Nagaon, Dist. Dhule (M.S.), India

<sup>2</sup>Department of Pharmaceutics, JMCT Institute of Pharmacy Nashik Dist. Nashik, (M.S.), India.

<sup>3</sup>Department of Pharmaceutics, Royal College of Pharmaceutical Education and Research, Malegaon. D. Nashik (M.S.), India.

<sup>4</sup>Department of Pharmacognosy, Gangamai College of Pharmacy, Nagaon, Dist. Dhule (M.S.), India.

\* **Correspondence Address:** Dr. Vaibhavkumar Jagtap, A. R. A. College of Pharmacy, Nagaon, Dist. Dhule (M.S.)


**Email Id:** [serviceheb@gmail.com](mailto:serviceheb@gmail.com)

**ABSTRACT**

Infants and children under five years of age are the most vulnerable to malaria with over 1,700 deaths per day from malaria in this group. However, until recently, there were no WHO-endorsed paediatric anti-malarial formulations available. AL tablets are inconvenient for caregivers to administer as they need to be crushed and mixed with water or food for infants and young children. Further, in common with other anti-malarials, they have a bitter taste, which may result in children spitting the medicine out and not receiving the full therapeutic dose. There was a clear unmet medical need for a formulation of Artemether / Lumefantrine specifically designed for children. Recent advances in oral drug delivery system aims to enhance safety and efficacy of drug molecules by formulating a convenient dosage form for administration and to achieve better patient compliance. In the present research work an attempt was made to formulate oral dispersible tablets specially developed for pediatric using excipients of varying the concentration by wet granulation technique. The API was subjected to preformulation study, which encompasses the "Accelerated drug excipient compatibility study", and the results obtained with selected excipients showed good compatibility with API. In the successful tablet formulation the selected tablets were studied for their quality control test via Appearance, Thickness, Hardness, Weight variation, and Disintegration time and in- vitro dissolution study, and Assay. Drug-Excipients

Compatibility study is initiated in order to confirm that the drug and excipient does not have any incompatibility.

**Keywords:** Artemether / Lumefantrine, preformulation, Compatibility, safety and efficacy

Access this Article Online	<b>Quick Response Code:</b> 
Website: <a href="http://www.journalofhospitalpharmacy.in">http://www.journalofhospitalpharmacy.in</a>	
Received on 13/06/2022	
Accepted on 27/06/2022 © HEB All rights reserved	