



## ORIGINAL RESEARCH

### Quality Evaluation of some Commercially Available Brands of Loratadine Tablets in Plateau State, Nigeria

Ajima U<sup>1\*</sup>, Wannang NN<sup>2</sup>, Poyi OC<sup>1</sup> and Onah JO<sup>1</sup>.

<sup>1</sup>Department of Pharmaceutical and Medicinal Chemistry, Faculty of Pharmaceutical Sciences, University of Jos, Jos, Plateau State, Nigeria; <sup>2</sup>Department of Pharmacology and Toxicology, Faculty of Pharmaceutical Sciences, University of Jos, Jos, Nigeria.

#### Address for correspondence:

Dr. Ukpe Ajima  
Department of Pharmaceutical and Medicinal Chemistry, Faculty of Pharmaceutical Sciences, University of Jos, Jos, Plateau State, Nigeria.  
Email: descar84@yahoo.com

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#### ABSTRACT

**Background:** Loratadine is a tricyclic, non-sedative histamine (H<sub>1</sub>)-receptor antagonist that is indicated for the treatment of allergic rhinitis and chronic idiopathic urticaria. Due to its high demand in Plateau State, Nigeria which has peculiar cold weather conditions, the drug is prone to falsification by unscrupulous individuals.

**Objectives:** This study was carried out to assess the chemical, physicochemical and biopharmaceutical quality of six brands of loratadine tablets marketed in the state.

**Methods:** Quality parameters such as uniformity of weight, crushing strength, friability, disintegration and dissolution were evaluated using standard Pharmacopoeial methods. The content of active pharmaceutical ingredients in the brands was also determined using a validated UV spectrophotometric method.

**Results:** The thickness (2.355 – 3.804 mm), diameter (7.195 -10.141 mm), uniformity of weight (0.0748 – 0.2462 g) and friability (0.10 – 0.28 %) of all the tested brands fell within acceptable limits. The crushing strength ranged between 3.10 – 8.80 KgF with four brands having values outside the acceptable range. Disintegration time for the brands ranged from 3.43 to 24.54 minutes. Two brands, LO2 and LO4, had content of active ingredient of 60 and 68% respectively which are below the Pharmacopoeial requirement. In the dissolution studies, three out of the six brands did not release up to 80% of active drug within one hour as required by official specification.

**Conclusion:** The study found that some of the tested brands of loratadine did not meet the Pharmacopoeial quality requirements hence there is an urgent need for continuous post-marketing surveillance of medicines.

**Keywords:** Loratadine; Quality control; GMP; Antihistamines; Tablets