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Determination of loratadine by UV molecular absorption spectrometry

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Abstract Loratadine (Ethyl 4-(8-chloro-5, 6-dihydro-11H-benzo [5, 6] cyclohepta [1, 2-b] pyridine-11-ylidine)-1-piperidinecarboxylate) is a last generation of H1-antihistamine drug used to treat allergies, and marketed for its non-sedating properties. At present, loratadine is studied by spectrophotometry, high-performance liquid chromatography and electrospray mass spectrometry.
This paper describes the development of a method for determination of loratadine by ultraviolet spectrophotometry: loratadine methanolic solution and complex ion tetraiodomercuriat $[HgI_4]^{2-}$ form a compound in the presence of hydrochloric acid. The 380nm maximum absorbance of the compound is proportional to its concentration in loratadine. The experiment establishes the appropriate working conditions (reaction environment, the optimal amount of reagent, the reaction time, etc.). The advantages of this sensitive method make it an efficient way to analyze loratadine from different types of samples.

Keywords: UV spectrometry, loratadine, potassium tetraiodomercuriat, macromolecules.

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