Ultraviolet, Visible and Infrared Simultaneous Spectrophotometric Assay of Pyrimethamine and Sulphadoxine in Dicomponent Antimalarial Drugs

التحليل المضوائي الطيفي الآني بالأشعة فوق البنفسجية والمرئية وتحت الحمراء للبايروميثامين والسلفادوكسين في أدوية مضادات الملاريا ثنائية التكوين

By

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Dedication

This effort is dedicated to

My dear parents,

Lovely husband,

Brother, sisters and kids.

Deep appreciation for their moral support, aspiration and fortitude.

I hope this degree will make them prouder.
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Abstract

The development of new methods for the assay of active components in diconponent antimalarial drugs are of great interest to pharmaceutical analysis, especially in developing countries.

Pyrimethamine and sulphadoxine, in particular, are still of continued use in the chemotherapy treatment of malaria disease. The growing need to develop more simple, accurate and sensitive assay methods is obvious. In the present work pyrimethamine and sulphadoxine were spectrophotometrically determined not only in the visible but also in the ultraviolet and infrared regions of the electromagnetic spectrum, using the two simultaneous equations method.

Whereas the ultraviolet method was based on measurement of the maximum absorbance of pyrimethamine and sulphadoxine at 275 nm and 265 nm, the visible procedure was developed on the bases of their maximum absorbance of their cholaranilic complexes at 520 nm, 500 nm respectively. The Infrared method, however, was based on their characteristic absorbance, (i.e. $-\log_{10}$ transmittance) at 833 nm, 1319 nm respectively. In all the three developed simultaneous spectrophotometric assay methods of pyrimethamine and sulphadoxine, contents in
لا يوجد نص يمكن قراءته بشكل طبيعي من الصورة المقدمة.
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