Simultaneous determination of omeprazole, tinidazole and clarithromycin in combination

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Abstract

This work is concerned with the determination of a mixture of omeprazole (OM), tinidazole (TN) and clarithromycin (CLAR) by different spectrophotometric techniques.

Determination of tinidazole depended on derivative spectrophotometry by measuring the peak amplitudes of the first derivative spectra at 330 nm without any interference from the other drugs. The linearity range was 10-50 µg.ml⁻¹ with mean percentage recovery of 99.77±0.60%.

Omeprazole in such mixture was determined either by first derivative technique at 290 nm via two regression equations or by the derivative compensation ratio technique. The linearity range was 0.8-20 µg.ml⁻¹ with mean percentage recovery of 100.08±0.52%.

The derivative ratio technique was the technique used for determination of clarithromycin in such mixture by measuring the peak amplitudes of the derivative ratio spectra at 255 nm. The linearity range was 0.25-2.5 mg.ml⁻¹ with mean percentage recovery of 100.05±0.24%.

The methods were tested for their specificity.

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