

Accepted Manuscript

Validation of Four Different Spectrophotometric Methods for Simultaneous Determination of Domperidone and Ranitidine in Bulk and Pharmaceutical Formulation

Maha F. Abdel-Ghany, Omar Abdel-Aziz, Yomna Y. Mohammed

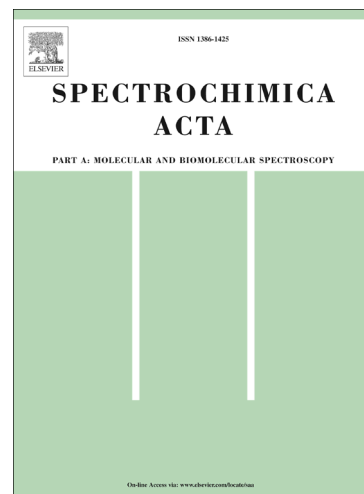
PII: S1386-1425(15)00493-X
DOI: <http://dx.doi.org/10.1016/j.saa.2015.04.021>
Reference: SAA 13572

To appear in: *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*

Received Date: 29 January 2015
Revised Date: 7 April 2015
Accepted Date: 12 April 2015

Please cite this article as: M.F. Abdel-Ghany, O. Abdel-Aziz, Y.Y. Mohammed, Validation of Four Different Spectrophotometric Methods for Simultaneous Determination of Domperidone and Ranitidine in Bulk and Pharmaceutical Formulation, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* (2015), doi: <http://dx.doi.org/10.1016/j.saa.2015.04.021>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Validation of Four Different Spectrophotometric Methods for Simultaneous Determination of Domperidone and Ranitidine in Bulk and Pharmaceutical Formulation

Maha F. Abdel-Ghany^a, Omar Abdel-Aziz^a, Yomna Y. Mohammed^{a*}

^aPharmaceutical Analytical Chemistry Department, Faculty of Pharmacy, Ain Shams University, Organization of African Unity Street, Abassia, Cairo (11566), Egypt.

Abstract

Four simple, specific, accurate and precise spectrophotometric methods were developed and validated for simultaneous determination of Domperidone (DP) and Ranitidine hydrochloride (RT) in bulk powder and pharmaceutical formulation. The first method was simultaneous ratio subtraction (SRS), the second was ratio subtraction (RS) coupled with zero order spectrophotometry (D^0), the third was first derivative of the ratio spectra (1DD) and the fourth method was mean centering of ratio spectra (MCR). The calibration curve is linear over the concentration range of 0.5–5 and 1–45 $\mu\text{g}\cdot\text{mL}^{-1}$ for DP and RT, respectively. The proposed spectrophotometric methods can analyze both drugs without any prior separation steps. The selectivity of the adopted methods was tested by analyzing synthetic mixtures of the investigated drugs, also in their pharmaceutical formulation. The suggested methods were validated according to International Conference of Harmonization (ICH) guidelines and the results revealed that; they were precise and reproducible. All the obtained results were statistically compared with those of the reported method, where there was no significant difference.

Keywords

Domperidone, Ranitidine HCl, Simultaneous ratio subtraction, Ratio subtraction, Derivative ratio, Mean centering.

*Corresponding author. Present address: Organization of African Unity Street, Abassia, Cairo (11566), Egypt.

Tel.: +20 1009508221

E-mail address: (yomna_yousry@yahoo.com), (yomna_yousry@pharma.asu.edu.eg)

Download English Version:

<https://daneshyari.com/en/article/7671225>

Download Persian Version:

<https://daneshyari.com/article/7671225>

[Daneshyari.com](https://daneshyari.com)