

6th Asia-Pacific Pharma Congress

July 11-13, 2016 Kuala Lumpur, Malaysia

Development and validation of a rapid derivative spectrophotometric method for simultaneous determination of Paracetamol, Ibuprofen and Caffeine in tablet dosage form

Inas A Abdallah, Dina Sameh, Nada Emad and Rania Abdelrahman
Misr International University, Egypt

A simple, rapid and accurate zero crossing derivative spectrophotometric method was developed and validated for the simultaneous determination of Paracetamol (PA), Ibuprofen (IB) and Caffeine (CAF). The derivative spectra of standard solutions of each compound were obtained at different orders to find out the suitable zero crossing points. Under the optimized conditions, determination of PA was performed at wavelength 271 nm using the first order (D1) ($\Delta\lambda=10.0$). IB and CAF were determined at wavelengths of 255 nm and 264 nm using first order (D1) ($\Delta\lambda=10.0$) and third order (D3) ($\Delta\lambda=20.0$) derivative spectra. The method was found to be linear in the range of 2.5-15 $\mu\text{g/mL}$ for both PA and IB and in the range of 0.4-2.4 $\mu\text{g/mL}$ for CAF. The method was successfully applied for the simultaneous determination of PA, IB and CAF in pharmaceutical dosage form (Cetafen[®] plus tablets) without any interference from excipients.

Biography

Inas A Abdallah has completed her PhD in Pharmaceutical Analytical Chemistry from Faculty of Pharmacy, Cairo University, Egypt in January 2012. She began her postdoctoral fellowship in June 2013 in University of Maryland, Baltimore, school of Pharmacy, USA. During her postdoctoral training, she has gained much experience in developing sensitive LC-MS/MS methods for the measurement of various compounds, especially polar analytes, and published several research papers.

inas.ali@miuegypt.edu.eg

Notes: