



Quantitative Determination of Gemifloxacin Mesylate in Tablets by Capillary Zone Electrophoresis and High Performance Liquid Chromatography

Vanessa F. TAVARES, Daniela C. S. PATTO, Anil K. SINGH, María S. AURORA-PRADO,
Erika R. M. KEDOR-HACKMANN, Maria Inês R. M. SANTORO*

*Department of Pharmacy, Faculty of Pharmaceutical Sciences,
University of São Paulo, Caixa Postal 66083, CEP 05315-970, São Paulo, SP, Brazil*

SUMMARY. The aim of this study was to develop and validate selective and sensitive methods for quantitative determination of an antibacterial agent, gemifloxacin, in tablets by high performance liquid chromatography (HPLC) and capillary zone electrophoresis (CZE). The HPLC method was carried out on a LiChrospher® 100 RP-8e, 5 μm (125 x 4 mm) column with a mobile phase composed of tetrahydrofuran-water (25:75, v/v) with 0.5 % of triethylamine and pH adjusted to 3.0 with orthophosphoric acid. The CZE method was performed using 50 mM sodium tetraborate buffer (pH 8.6). Samples were injected hydrodynamically (0.5 psi, 5 s) and the electrophoretic system was operated under normal polarity, at +20 kV and capillary temperature of 18 °C. A fused-silica capillary 40.2 cm (30 cm effective length) x 75 μm i.d. was used. Both, HPLC and CZE could be interesting and efficient techniques to be applied for quality control in pharmaceutical industries.

KEY WORDS: Capillary zone electrophoresis, High performance liquid chromatography, Gemifloxacin, Tablets, Method validation.

* Author to whom correspondence should be addressed. *E-mail:* ines@usp.br