Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **30** (4): 753-8 (2011)

Original Article
Received: September 16, 2010
Revised version: October 10, 2010
Accepted: October 11, 2010

Simultaneous Determination of Olmesartan Medoxomil and Amlodipine Besylate in Pharmaceutical Formulations by Capillary Zone Electrophoresis

Mustafa ÇELEBIER, Incilay SÜSLÜ & Sacide ALTINÖZ *

Department of Analytical Chemistry, Faculty of Pharmacy, Hacettepe University, 06100, Sıhhiye, Ankara, Turkey

SUMMARY. **A simple, efficient and reliable capillary zone electrophoresis method with diode array detection was developed and validated for the simultaneous determination of olmesartan medoxomil and amlodipine besylate in their binary mixtures. The optimum separation for these compounds was achieved with a fused - silica capillary column (i.d. 75.0 μm, total length 48.5 cm and effective length 40.0 cm) and 40.0 mM citrate buffer at pH 6.0 as the running buffer. The samples were injected hydrodynamically for 3 s at 50 mbar and applied voltage was + 15 kV at 30 °C capillary temperature. Detection wavelength was set at 235 nm. Valsartan was used as internal standard. The method was validated with respect to stability, linearity, sensitivity, precision, accuracy, recovery and selectivity. The linear calibration range was found to be 2.00 - 30.00 μg/mL for olmesartan medoxomil and amlodipine besylate. The limits of detection (LOD) were 0.05 μg/mL for both compounds. The relative standard deviations (RSD) of the proposed method ranged between 1.51 and 2.49 % for intra-day precision and 1.51 and 3.73 % for inter-day precision. The developed and validated method successfully applied for the simultaneous determination of olmesartan medoxomil and amlodipine besylate in their pharmaceutical formulations.**

KEY WORDS: Amlodipine besylate, Capillary zone electrophoresis, Olmesartan medoxomil, Pharmaceutical formulations, Simultaneous determination.

* Author to whom correspondence should be addressed. *E-mail:* saltinoz@hacettepe.edu.tr