



Application of Capillary Electrophoresis to Investigate the Degradation Kinetic of Olmesartan Medoxomil

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SUMMARY. A simple capillary zone electrophoresis method was applied in order to investigate the degradation of olmesartan medoxomil in basic pHs. A kinetic approach was performed to enlighten its degradation process. Olmesartan medoxomil, solved in acetonitrile and diluted with 30 mM phosphate buffer, was injected six times within five hours by using running electrolytes of different pHs (30 mM phosphate buffer pH 7.5, 8.0 and 8.5). A fused silica capillary (i.d. 50.0 μ m, total length 48.5 cm and effective length 40.0 cm) was employed for the analysis. The separation and best peak shape was achieved by applying 30 kV voltage at 30 °C capillary temperature. A diode array detector was used at 210 nm wavelength. Diflunisal was the internal standard. It was clarified that the degradation of olmesartan medoxomil progresses with a first order reaction kinetic. For pH 7.5, 8.0, and 8.5 the first order kinetic constants (k) were found to be 0.042, 0.092, and 0.171 respectively.

KEY WORDS: Capillary Electrophoresis, Degradation Kinetic, Method Development, Olmesartan Medoxomil, Stability Screening.

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