Abstract

A method based on capilllary zone electrophoresis (CZE) with UV detection was developed for simultaneous separation and determination of bioflavonoids hesperidin and diosmin. The analysis was performed in a fused silica capillary with effective lenght 60 cm and 50 μm I.D. UV detection was used at 207 nm. The optimum separation conditions were found out in this work. Samples were loaded hydrodynamically at a pressure of 50 mbar for 20 s. The background electrolyte consisted of 10 mM phosphate, 40 mM borate buffer with 10% MeOH, 15 mM β-CD (pH* 8,0) at 25 °C. The separation voltage was +20 kV. Methylparaben was chosen as an internal standard. The calibration dependences were rectilinear in the range from 0,025 to 0,4 mg/ml for hesperidin (R=0,9973) and from 0,05 to 0,8 mg/ml for diosmin (R=0,9987). The single analysis took about 15 min. The method was suitable for determining the bioflavonoids in pharmaceutical preparation Detralex capsules with RSD values 2.4 % (diosmin) and 3.1 % (hesperidin), n=6. The recoveries were from 93,09 to 102,30 % as found by the standard addition technique.