Abstract

Partial Filling method (PF) and Flow Induced Dispersion Analysis (FIDA) were used for the determination of stability constants of model system of four profens (*R*-Flurbiprofen, *S*-Ibuprofen, *S*-Ketoprofen and *S*-Naproxen) complexing with β-cyclodextrin. When using PF method, only a part of capillary is filled with the selector and thus the analyte must migrate through the zone of selector first and then through the neat BGE (it has different mobilities in both zones). Dependency of the differences in migation time on the length of the selector zone is then studied. When FIDA is used, the analyte in pushed through the capillary by external pressure and dependency of the rate of peak dispersion of the analyte on the concentration of selector in capillary is observed. Moreover, PF experiments were theoretically studied by Simul 5 Complex computing programme. Values of stability constants obtained by both methods were compared with values obtained by frequently used Affinity Capillary electrophoresis (ACE) method.

The comparison of stability constants values determined by PF method and FIDA shows that both investigated methods grants results comparable with those obtained by the ACE.