Abstract

The dependencies of the electrophoretic mobility of histidine on pH were measured in two sets of buffers at 20mM ionic strength. The parameters, which were obtained from these curves, were subsequently corrected to zero ionic strength using an older approach, as well as using the newly developed program AnglerFish. The effect of the ionic atmosphere on the pKₐ and mobility is shown, as well as the shape of the relevant corrections, which allow the determination of the pKₐ and mobility at infinite dilution. A new compound, imatinib, which is a quadruple positively charged nitrogenous heterocyclic compound, was also measured, and its pKₐ constants and mobilities were likewise determined.

Key Words

capillary zone electrophoresis, ionic strength, limiting mobility, pKₐ, zero ionic strength corrections