Abstract

In this diploma thesis, a preliminary study on the applicability of EKC-PF (with CD as chiral selector) to the separation of chiral pesticides was performed. In introduction, theoretical informations are presented concerning electrophoresis instrumentation and theory as well as different electrophoresis modes. Then, enantiomeric separation is introduced through cyclodextrins and possibilities of partial filling mode to finally terminate with a definition of chiral pesticides and some information about their enantioseparation. Concretely, in the experimental part, the evaluation of enantioresolution of several chiral pesticides (trichlorphon, cyproconazole, hexaconazole, imazalil, myclobutanil, penconazole, tebuconazole, propiconazole, and benalaxyl) using CM- β -CD as chiral selector was performed. First of all, a univariate optimization of variables (CM- β -CD injection time, voltage, temperature, pH, and buffer nature and concentration) was carried out for benalaxyl. Finally a screening, involving the effect of the CM- β -CD injection time, was performed for the other pesticides to check the potential of this CD as chiral selector.