

# UTILISATION OF ELECTROMIGRATION METHODS IN ANALYSIS OF NATURALLY OCCURRING COMPOUNDS

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## ABSTRACT

A transient isotachopheresis-capillary zone electrophoresis (tITP-CZE) method has been developed for pre-concentration and determination of nine analytes: caffeic, chlorogenic, o-coumaric, p-coumaric, ferulic and protocatechuic acid, and kaempferol, quercetin and rutin. The effects of several factors such as control of EOF, pH and concentration of the running buffer, addition of organic solvents and their concentrations, addition of cyclodextrins, the duration of injection and the  $\lambda$  max of UV detection were investigated to find the optimum conditions. Under these conditions, the analytes were separated within 15 min. Linearity was evaluated for concentration range 2.5-37.5  $\mu\text{g/ml}$  with  $R = 0.9924-0.9983$ ; the detection limits (S/N 3:1) ranged from 203ng/ml to 5.556  $\mu\text{g/ml}$ . The relative standard deviations of the migration times (peak areas) were between 0.79 and 1.01% (1.34 and 2.13%).